Proceedings of the Thirty-Fifth Annual International Congress

On

Veterinary Acupuncture

26th – 29th August, 2009

Marriott Riverwalk Hotel
San Antonio, TX, USA

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THE INTERNATIONAL VETERINARY ACUPUNCTURE SOCIETY
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Proceedings
of the
35th
Annual International Congress
On
Veterinary Acupuncture

Marriott Riverwalk Hotel
San Antonio, TX USA
August 26-29, 2009

Edited by
The International Veterinary Acupuncture Society
Congress Program Committee

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Welcome Message from the President

Dear Congress Attendees:

Welcome to all of you who have decided to attend our 35th annual IVAS Congress here in San Antonio, Texas. Those of you who never visited San Antonio will really appreciate this wonderful environment.

This is now 35 years since IVAS started organizing annual congresses. Organizing a congress takes almost two to three years preparation, which constitutes a real challenge, so you may imagine the workload this represents. As well as the amount of imagination it takes in order to be able to gather interesting people with attractive topics every year. This year again, our responsible IVAS people where able to build a very attractive program, which will hopefully be appreciated by all of you. Dr K. Hwa Choi, Dr Bruce Fergusson, and Dr Deborah Mitchell, will for sure, as usual, impress us by their presentations.

Beside these three outstanding speakers, many other people will enlighten us with their presentations. Topics like oncology, urinary tract diseases, TCVM Diagnosis, or Dermatology and Endocrine Disharmonies are all topics we have to deal with every day in our practices. Many other practical topics will be addressed. I am sure there will be interesting food for everybody. We hope you all will be able to pick up some interesting points!

Continuing Educations is not only bringing us new material, presenting new concepts, informing us about new techniques; but continuing education is a reminder of already known topics, concepts that are not used every day, reminders of techniques that we are not using too often. IVAS really plays an important role here by organizing its annual congresses. It gives the opportunity to meet people from all over the world. Gathering together is one of the main points of our Annual Congress. In this difficult economic period, IVAS wants to continue to play its role of gathering people from different horizons.

I take here the opportunity to thank deeply all our speakers, as well as the responsible people of the Program Committee who are offering us their time in order to bring us every year a valuable scientific program. A special thanks to Linda Boggie, chair of the Program Committee, who helped IVAS in this task for many years with tremendous enthusiasm and knowledge, without calculating her time; Linda will hand over the torch to Kim Samuelsen for the next Congress.

As President of IVAS, I want to say to you all thank you for accepting IVAS invitation to San Antonio. I wish you all to enjoy your stay in San Antonio, to have fun with each other, and to learn a lot.

I wish you all a very instructive, wonderful, and pleasant Congress. I also invite you all to our IVAS Annual Congress next year in Aalborg, Denmark.

Boudewijn CLAEYS,
President IVAS
Special Thanks to our Sponsors and Exhibitors

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Speakers

Chris A. Bessent, DVM
Private Practice
W339 N8120 Townline Rd
Oconomowoc, WI 53066
Phone: (262) 966-9891
Email: cabessent@herbsmithinc.com

Maurice F. Casey, III, DVM
Private Practice
PO Box 147
Marshall, VA 20116-0147
Phone: (540) 364-4281
Email: caseydvm@aol.com

Connie Chevis, DVM
Alternative Medicine for Pets
2016 Benigno Lane
Bay St. Louis, MS 39520
Phone: (228) 671-6210
Email: clchevis@aol.com

K. Hwa Choi, DVM, MS, PhD
Univ. of Minnesota College of Vet. Med.
Integrative Medicine, College of Vet Med
1352 Boyd Ave
Saint Paul, MN 55108-6100
Phone: (612) 624-1227
Email: choix006@umn.edu

Bruce Ferguson, DVM
Integrative Veterinary Services
16601 NW CR 329
Reddick, FL 32686
Phone: 352-591-0868
Email: naturalvet@earthlink.net

Carolina Ctebecheran Haddad, DVM
Acuvet
Rua Imperatriz Leopoldina 27, Apt 11
Ponta Da Praia, Santos,
San Paulo, CEP 11030.480
BRAZIL
Phone: 55 13 9788 8092
Email: carolhaddadvet@hotmail.com

Kevin J. May, DVM
El Cajon Valley Veterinary Hospital
560 N Johnson Ave
El Cajon, CA 92020-3118
Phone: (619) 444-9491
Email: kjmaymsi@cox.net

Deborah Mitchell, DVM, MS
Knollwood Hospital for Pets
2237 W Schaumburg Rd
Schaumburg, IL 60194-3891
Phone: (847) 891-8944
Email: dnmmdvm@aol.com
Arthur I. Ortenburger, DVM
University of Prince Edward Island
550 University Ave
Charlottetown, PE C1A 4P3
CANADA
Phone: 902-566-0820
Email: ortenburger@upei.ca

Uwe Petermann, DVM
Private Practice
Schmale Strasse 20
Melle 49326
GERMANY
Phone: 49-5428-93003
Email: DrUwePetermannmelle@t-online.de

Dr. Astrid Reitz
Private Practice
Roehrwangstr. 6
D-87653 Eggenthal
GERMANY
Phone: 49-1736-508597
Email: info@praxis-dr-reitz.com

Kerry J. Ridgway, DVM
Equine Therapeutic Options
508 Coleman Bridge Rd
Aiken, SC 29805-8502
Phone: (803) 643-9188
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Andreas Roesti, DMV
Private Practice
Chruemigstrasse 18
Wimmis 3752
SWITZERLAND
Phone: 41-33-657-16-16
Email: roesti_vet.wimmis@bluewin.ch

Kim Samuelsen, DVM
NOVAS: Nordisk Veterinaer
Akupunktur Selskab
Ejdrupvej 43 Ejdrup
9240 Nibe
DENMARK
Phone: 45-98623100
Email: mr.kim@mail.dk

Martina Steinmetz, DVM
Private Practice
Friedrich Ebert Str 45
68535 Edingen-Neckarhausen
GERMANY
Phone: 49-1729445602
Email: martina-steinmetz@web.de

Xiuhui Zhong, PhD, Professor
Dean, The College of Traditional Chinese Veterinary Medicine
Agricultural University of Hebei
Baoding 071001, China
Phone & Fax: 86-312-2381158
Email: zhongxiuhui@hotmail.com
## Program

### Wednesday, August 26, 2009

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<tr>
<th>Time</th>
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<td>08:00 - 16:00</td>
<td>Registration</td>
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<tr>
<td>08:15 - 09:10</td>
<td>House of Delegates</td>
<td>Dr. Kristine Elbaek, Salon D Ballroom</td>
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<tr>
<td>13:30 - 14:20</td>
<td>Introduction to Oriental Medicine Oncology Acupuncture and Herbal Treatment</td>
<td>Dr. K. Hwa Choi, Salon D Ballroom</td>
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<tr>
<td>14:30 - 15:20</td>
<td>Introduction to Oriental Medicine Oncology Acupuncture and Herbal Treatment - Cont'd</td>
<td>Dr. K. Hwa Choi, Salon D Ballroom</td>
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<td>15:20 - 15:50</td>
<td>BREAK</td>
<td>Foyer</td>
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<tr>
<td>15:50 - 16:40</td>
<td>Introduction to Oriental Medicine Oncology Acupuncture and Herbal Treatment - Cont'd</td>
<td>Dr. K. Hwa Choi, Salon D Ballroom</td>
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<tr>
<td>10:00 - 12:00</td>
<td>Tongue and Pulse Diagnosis in Small Animals</td>
<td>Dr. Bruce Ferguson, Milam Room</td>
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<tr>
<td>17:00 - 19:00</td>
<td>Welcome Reception</td>
<td>Exhibitor Hall Salons A B C Ballrooms</td>
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<td>08:00 - 08:15</td>
<td>Morning Announcements</td>
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<tr>
<td>08:15 - 09:05</td>
<td>TCVM: Getting Results Making a TCVM Diagnosis for Non-Experts</td>
<td>Dr. Bruce Ferguson</td>
<td>Salon D Ballroom</td>
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<tr>
<td>09:10 - 10:00</td>
<td>Increasing Your Acupuncture Results</td>
<td>Dr. Bruce Ferguson</td>
<td>Salon D Ballroom</td>
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<td>10:00 - 10:30</td>
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<tr>
<td>10:30 - 11:20</td>
<td>Increasing Your Acupuncture Results Cont’d</td>
<td>Dr. Bruce Ferguson</td>
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<td>11:25 - 12:15</td>
<td>Increasing Your Acupuncture Results Cont’d</td>
<td>Dr. Bruce Ferguson</td>
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<td>12:15 - 13:30</td>
<td>LUNCH</td>
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<tr>
<td>13:30 - 14:20</td>
<td>Diagnostic Points: How to Use Them in Acupuncture Practice for Diagnosis and Treatment in Small Animals</td>
<td>Dr. Carolina Haddad</td>
<td>Salon D Ballroom</td>
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<tr>
<td>14:30 - 15:20</td>
<td>Adverse Effects of Animal Acupuncture: Review of 1,292 treatments</td>
<td>Dr. Art Ortenburger</td>
<td>Salon D Ballroom</td>
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<td>15:20 - 15:50</td>
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<tr>
<td>15:50 - 16:40</td>
<td>Laser Acupuncture in Infectious Diseases and Wound Infections Including MRSA Infections</td>
<td>Dr. Uwe Petermann</td>
<td>Salon D Ballroom</td>
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<tr>
<td>16:50 - 17:40</td>
<td>Status of TCVM in China</td>
<td>Dr. Xiuhui Zhong</td>
<td>Salon D Ballroom</td>
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<tr>
<td>17:50 - 19:20</td>
<td>Annual General Meeting in General Lecture Hall</td>
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**Track Two**

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<tr>
<td>13:30 - 14:20</td>
<td>Zone Therapy Acupoints in Horses with Osteopathic Lesions, Optional Wet Lab Friday</td>
<td>Dr. Kim Samuelsen</td>
<td>Salon E Ballroom</td>
</tr>
<tr>
<td>14:30 - 15:20</td>
<td>Diagnosis And Therapy for Sacroiliac Injuries in the Equine Athlete, Optional Wet Lab Friday</td>
<td>Dr. Maurice Casey</td>
<td>Salon E Ballroom</td>
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<tr>
<td>15:50 - 16:40</td>
<td>Equine TMJ – Myofascial Pain Syndrome Diagnosis and Treatment, Optional Wet Lab Friday</td>
<td>Dr. Kevin May</td>
<td>Salon E Ballroom</td>
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<tr>
<td>16:50 - 17:40</td>
<td>Acupressure - Support your Therapy and Teach your Clients</td>
<td>Dr. Astrid Reitz</td>
<td>Salon E Ballroom</td>
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**Wet Labs**

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<tr>
<td>13:30 - 15:20</td>
<td>Oriental Medicine Oncology and Acupuncture/Herbal Treatment Wet Lab</td>
<td>Dr. K. Hwa Choi</td>
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<tr>
<td>15:50 - 17:40</td>
<td>Canine Point Location Wet Lab</td>
<td>Dr. Bruce Ferguson</td>
<td>Travis Room</td>
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# General Keynote Session

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<tr>
<td>08:00 - 08:15</td>
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<tr>
<td>08:15 - 09:05</td>
<td>Diagnostic Criteria for Dermatologic and Endocrine Disharmonies</td>
<td>Dr. Bruce Ferguson</td>
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<td>09:10 - 10:00</td>
<td>Diagnostic Criteria for Dermatologic and Endocrine Disharmonies Cont’d</td>
<td>Dr. Bruce Ferguson</td>
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<td>10:30 - 11:20</td>
<td>Choosing Herbal Formulas for Dermatologic and Endocrine Disharmonies</td>
<td>Dr. Bruce Ferguson</td>
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<td>11:25 - 12:10</td>
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<td>12:10 - 13:30</td>
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<td>13:30 - 14:20</td>
<td>Preliminary Study: Transposition of Meridians and Acupoints from Canine and Equine to the Atlantic Bottlenose Dolphin</td>
<td>Dr. Connie Chevis</td>
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<td>14:30 - 15:20</td>
<td>Equine C.O.P.D.- TCVM Practice and Supporting Scientific Findings</td>
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<td>15:50 - 16:40</td>
<td>Food Therapy in Oriental Medicine Treatment of Cancer</td>
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## Track Two

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<th>Session</th>
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<tbody>
<tr>
<td>13:30 - 14:20</td>
<td>Comparative Reflex Zones – The Use of Distal Zones to Aid in Treatment</td>
<td>Dr. Andreas Roesti</td>
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<tr>
<td>14:30 - 15:20</td>
<td>Disturbance Foci in TCM/TCVM</td>
<td>Dr. Andreas Roesti</td>
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<tr>
<td>15:50 - 16:40</td>
<td>Treatment of Masticatory Myositis in a Dog</td>
<td>Dr. Carolina Haddad</td>
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## Equine Wet Labs

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<th>Speaker</th>
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</thead>
<tbody>
<tr>
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<td>Bus to Lab for Equine Wet Labs – Sack Lunch</td>
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<tr>
<td>13:30 - 15:20</td>
<td>Equine Diagnosis And Therapy for Sacroiliac Injuries in the Equine Athlete</td>
<td>Dr. Maurice Casey</td>
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<tr>
<td>13:30 - 15:20</td>
<td>Equine Zone Therapy Acupoints in Horses with Osteopathic (Chiropractic) Lesions</td>
<td>Dr. Kim Samuelsen</td>
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<tr>
<td>15:50 - 17:40</td>
<td>Equine Temporomandibular Joint – Myofascial Pain Syndrome Diagnosis and Treatment</td>
<td>Dr. Kevin May</td>
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<tr>
<td>15:50 - 17:40</td>
<td>Equine Acupressure – Support Your Therapy and Teach Your Clients</td>
<td>Dr. Astrid Reitz</td>
<td>Saddle Light Center Offsite</td>
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## Small Animal Wet Labs

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<th>Session</th>
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<th>Location</th>
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</thead>
<tbody>
<tr>
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<td>Small Animal Tongue and Pulse Diagnosis Wet Lab</td>
<td>Dr. Bruce Ferguson</td>
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## Banquet

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<tbody>
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<td>Banquet and Dance</td>
<td>Salon D Ballroom</td>
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<tr>
<td>Time</td>
<td>Session</td>
<td>Speaker</td>
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<tr>
<td>08:45</td>
<td>Morning Announcements</td>
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<tr>
<td>09:00 - 10:00</td>
<td>TCVM Perspectives on Urinary Tract Disease</td>
<td>Dr. Deborah Mitchell</td>
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<td>10:00 - 10:25</td>
<td>BREAK</td>
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<tr>
<td>10:25 - 11:15</td>
<td>TCVM Perspectives on Urinary Tract Disease Cont’d</td>
<td>Dr. Deborah Mitchell</td>
</tr>
<tr>
<td>11:20 - 12:10</td>
<td>What's in your Crashbox?</td>
<td>Dr. Deborah Mitchell</td>
</tr>
<tr>
<td>12:10 - 12:25</td>
<td>Farewell!! Until Next Year</td>
<td></td>
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</table>

**Track Two**

<table>
<thead>
<tr>
<th>Time</th>
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<tr>
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</tr>
<tr>
<td>09:00 - 10:00</td>
<td>Are Equine Ulcers the Disease Du Jour, or are we</td>
<td>Dr. Kerry Ridgeway</td>
<td>Salon E Ballroom</td>
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<tr>
<td></td>
<td>Seeing the Tip of the Iceberg?</td>
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<tr>
<td>10:00 - 10:25</td>
<td>BREAK</td>
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<td>Exhibit Hall</td>
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<tr>
<td>10:25 - 11:15</td>
<td>Enhance Your Practice With the Synergy of Acupuncture Plus Chiropractic</td>
<td>Dr. Kerry Ridgeway</td>
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<tr>
<td>11:20 – 12:10</td>
<td>Electroacupuncture And Hirudotherapy in the Treatment of Horses</td>
<td>Dr. Martina Steinmetz</td>
<td>Salon E Ballroom</td>
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</tbody>
</table>
Proceedings

of the

Thirty-Fifth Annual International Congress on Veterinary Acupuncture
Wet Lab: Tongue and Pulse Diagnosis in Small Animals
Bruce Ferguson, DVM, MS
Adjunct Senior Lecturer, School of Veterinary and Biomedical Sciences
Murdoch University, Murdoch, WA

ABSTRACT
Pulse diagnosis has long been an integral part of many indigenous medical systems. Traditional Chinese Medicine (TCM) has a rich and diverse history of pulse diagnosis. Modern interpretation of human TCM pulse diagnosis has led to some profound expansions of the system originally developed for an agrarian nation with few modern conveniences. From a foundation of Yin and Yang, the vital substances of Qi and Blood can be shown to have recognizable correlations in the pulse. Pattern Differentiation based upon deficiencies and excesses of these pulse qualities can lead to rational treatment strategies.

INTRODUCTION
Many cultures have utilized some form of pulse diagnosis in their medical systems (Amber and Babey-Brooke, 1993). The most well known include China (Traditional Chinese Medicine), Greece (Traditional Greek Medicine), Persia (Tibb Unani), and India (Ayurveda). The pulse is thought to reflect both the overall health and vigor of the patient as well as contain detailed information of energetic status of organs and body substances. Recently Dr. Leon Hammer has published a treatise based upon the life-long work of a dynastic family physician, Dr. John Shen. In this text, Chinese Pulse Diagnosis: A Contemporary Approach (2001), the pulse qualities in humans are vastly expanded and deepened compared with most current human pulse systems. From this reference point, an attempt is being made to correlate a number of these pulse qualities in non-humans. We hope that this effort will encourage others to examine the pulse in veterinary practice and expand our current database.

Where is the pulse taken? Traditional Chinese Veterinary Medicine (TCVM) utilizes pulse diagnosis in a number of mammalian species. Pulse qualities are examined at the carotid artery in horses, proximal femoral artery in cats, dogs, and porcine patients, and ventral tail artery in ruminants (Xie, 1994). The pulse is considered to be of primary importance in establishing a TCVM diagnosis.
Recently, Dr. Steve Marsden has suggested examining the pulse at the distal femoral artery in small quadrupeds (Marsden, 2001). His logic is based upon the fluid dynamics of the pulse as it approaches more distal areas of the quadruped body such as the radial artery does in humans. This suggestion is currently under investigation by a number of practitioners trained by Dr. Marsden. It may be that it is complementary, rather than in contradistinction, to the TCVM pulse.

Dr. Are Thoresen has noted that the pulse may be difficult to ascertain in a number of creatures of different sizes and shapes due to both the location of pulse examination and the size of the artery examined relative to the fingers of the examiner (Thoresen, 2000). For example, will the three fingers of a human examining the femoral artery of a 50 kg dog cover the same area of artery and derive similar information as the same three fingers on their femoral artery of a 5 kg cat? In order to reduce this examination bias and bring consistency to pulse diagnosis across different sizes and shapes of the species examined, Dr. Thoresen both utilizes and teaches a “surrogate” pulse. This is based upon the examiner taking her or his own pulse and briefly touching the patient to find the changes in the examiner’s own pulse. The greatest energetic change in any one primary pulse position of the examiner is taken to be the patient’s greatest deficiency. Dr. Thoresen’s technique seems best suited to a diagnosis and treatment system based upon deficiency (see <arethore@online.no>). Regardless of the pulse position which the examiner chooses to utilize, the following information is based upon pulse qualities and should remain valid.

**Pulse Qualities.** Students of TCVM are commonly taught that Yin and Yang are the basis of much of the medical system. Although westerners may at first find this theoretical framework too simplistic, closer examination reveals many pertinent truths. With regard to the pulse, we are very interested in the Yin qualities to ascertain the status of both vital substances (Blood) and cooling versus inflammatory tendencies. Yang pulse qualities give us information about body and organ energies and another class of vital substances (Qi).

Of the vital substances, Blood is contained within the category of Yin, and Qi within the category of Yang. Of course, there is always a continuum of Energy (Yang) and Matter (Yin) in TCVM. TCVM Blood is itself a very dense and material (Yin) form of Qi. Blood is derived from
Food Qi from the Spleen and Lung Qi’s action on the Heart. Qi has a plethora of relationships in TCVM. For our purposes Qi is a form of Yang energy which manifests on the physical level.

For either Yin and Yang or Qi and Blood there can be excesses or deficiencies. Understanding these qualities is one basis for Pattern Differentiation (Bian Zheng) in TCVM. Because we seek to understand the energetic workings of a patient rather than make a structural diagnosis, it is imperative to know if Yin/Yang and Qi/Blood have deficiencies or excesses.

Most practitioners of TCVM choose to use acupuncture as a treatment modality. Many acupuncture points have an energetic correspondence and can benefit Yin, Yang, Qi, or Blood. Correct interpretation of the patient’s needs is important in choosing an acupuncture protocol. Those practitioners who utilize herbal remedies have an even greater requirement to correctly understand the Pattern Differentiation based upon the pulse. This is because herbs have more powerful direction to their energetic activities than acupuncture points. For example, it may not cause harm to an animal with Yang and Qi deficiency (cold and weak) to be misdiagnosed and needled at Quchi, LI 11 when it is not indicated. But if we give a strong cold, bitter herb to such an animal (e.g. Coptis, Huang Lian) due to misunderstanding the energetic status of the patient, we can indeed do harm.

There are many possible correlates for each pulse quality that is soon to be described (Hammer, 2001). However, for heuristic purposes I have chosen to limit each pulse quality to a simple one-to-one correlation with the most common vital substance and energetic disharmony. I have found in my own education that complex systems may be frustrating and difficult to learn. So in this presentation the correlations that will be presented are simplified. But the astute practitioner needs to be aware of the greater complexity of pulse qualities and correlations with disharmonies that is beyond the scope of this introductory laboratory.

Table 1 Qualities of the Healthy Pulse

<table>
<thead>
<tr>
<th>Yin: Rooted</th>
<th>Blood: Full</th>
<th>Yang: Superficial</th>
<th>Qi: Forceful</th>
</tr>
</thead>
</table>

The healthy pulse has Yin and Yang energetic qualities as well as Qi and Blood substance qualities. Table 1 defines the pulse qualities for the healthy pulse. The healthy pulse has balanced superficial (Yang) and rooted (Yin) qualities. This means that the practitioner’s fingers can feel the energy of the pulse when first assessing the most superficial aspects of the vessel and continue to press more deeply into the vessel while continuing to feel similar energy. A healthy
pulse should also have enough Blood to expand the vessel to a diameter that correlates well with the size and age of the patient (Full). This Blood should move through the vessel with average force (Qi), being neither too weak nor too strong.

Table 2 Qualities of Excess and Deficiency in the Pulse

<table>
<thead>
<tr>
<th>Yin Excess: Slippery</th>
<th>Yin Deficiency: Tight</th>
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<tbody>
<tr>
<td>Blood Excess: Choppy</td>
<td>Blood Deficiency: Thin</td>
</tr>
<tr>
<td>Yang Excess: Pounding</td>
<td>Yang Deficiency: Deep</td>
</tr>
<tr>
<td>Qi Excess: Taut</td>
<td>Qi Deficiency: Weak</td>
</tr>
</tbody>
</table>

The patient with disharmonies will show deviations of excess or deficiency with respect to the pulse qualities seen in Table 1. These changes in the pulse are seen in Table 2. Slippery refers to a pulse that moves quickly under the examiner’s fingers in one direction when pressed and is independent of finger pressure. It is commonly associated with a damp condition in which the blood viscosity is increased due to elevated lipids and glucose, blood infection, systemic infection, or pregnancy. Tight refers to a pulse that is thin and less resilient than the Taut pulse, with only a little flexibility and resilience remaining. This is due to chronic Qi stagnation leading to heat from deficiency and is actually a type of Yin deficiency in which the vessel wall has lost elasticity. So, while Tight was once associated with stagnation due to internal cold, in modern times it is more often found with moderate heat from deficiency. For example, chronic Liver Qi stagnation will generate heat that damages the vessel wall and leads to a Tight pulse (sometimes considered a stage of “Wiry” in TCVM).

Choppy refers to a pulse that is uneven and grating to the finger, like rubbing it across a washboard or scraping bamboo with a dull knife. The Choppy quality is always a sign of serious pathology most commonly correlated with Blood Stagnation. This stagnation can be due to heat from excess or deficiency, Qi deficiency, cold from excess, neoplasm or trauma. Since the choppy quality is most commonly due to Blood Stagnation from Excess, remember in the case of Blood Excess we do not say, for example, “Heart Blood Excess” but rather “Heart Blood Stagnation”. So a disharmony of Blood Excess that leads to a Choppy pulse actually refers to Blood Stagnation. Thin refers to pulse that is narrower than the width of the normal pulse and is due to a reduction in the Blood which normally fills the vessel. A thin pulse with Blood Deficiency may refer to both the number of circulating red blood cells and/or the plasma portion of the blood.
With respect to Yang, Pounding refers to a pulse that beats forcefully against the examiner’s finger. Although Pounding may be found at various depths in the pulse, the most common etiology of this disharmony is systemic or organ Heat. Deep refers to the pulse not being found to have detectable force at the superficial aspect of the vessel. The vessel wall is itself palpable, but there seems to be no pulsatile force against the examiner’s finger until the deeper aspects of the vessel are probed. A Deep pulse is taken to mean a significant depletion of the true Qi (Zheng Qi). True Qi is correlated with the Yang basal metabolic heat which drives most processes in the body and is based upon the health of the Kidney Yang. This loss of Yang Qi can be due to excessive physical or mental work, poor dietary habits, lack of rest, chronic illness, and the depletion of Kidney Yang with aging. Deep pulses suggest that the metabolic fire is beginning to fade.

Taut refers to a pulse that has lost some resilience, is less compressible, and is slightly more resistant to pressure. It has the sensation of resilience and flexibility of a very wide rubber band that has been stretched but has "give" on pressure. According to Dr. Hammer, it represents the first stage of resistance to the free flow of Qi through the channels and therefore is the earliest sign of Qi Stagnation. Remember that in the case of Qi Excess we do not say, for example, “Liver Qi Excess” but rather “Liver Qi Stagnation”. A Weak pulse of course means that the examiner can feel the Blood in the vessel, but that fluid is easily pressed into and does not push back against the finger with any significant force. Sometimes referred to as “Feeble”, Weak pulses are most commonly due to Qi Deficiency and may be related to poor diet, overwork, overthinking, and chronic disease processes.

_Treatment Principles Based Upon Pulse Qualities._ One of the rewarding aspects of TCVM practice is treatment based upon Pattern Differentiation. In fact, if one can accurately differentiate the primary disharmony, treatment is merely reversing what we see. For example, if we find that an animal is Blood Deficient, we can choose to Nourish or Tonify Blood with acupuncture (e.g. Xue Hai SP 10, Hou San Li ST 36, Ge Shu BL 17, Pi Shu BL 20, San Yin Jiao SP 6) and herbal formulae (e.g. Si Wu Tang). Below are brief treatment suggestions based upon the pulse qualities that the examiner finds.

The following examples of simple Yin/Yang and Qi/Blood disharmonies and their treatments are for instructional purposes. It is somewhat rare to find any of these disharmonies in
pure form in our patients. The suggested acupuncture points and TCM herbal formulae are intended to guide the practitioner and not substitute for good Pattern Differentiation. The most simple acupuncture and herbal formulae are presented because we have not discussed a Zang Fu disharmony and cannot, from qualities alone, always give a Pattern Differentiation based upon an organ disharmony. Please remember to treat each individual and not just Patterns of disharmony.

Yin Excess with a slippery pulse must be properly differentiated in order to effectively treat. If the Slippery quality is due to Damp combined with Heat in the channels, the appropriate Ying-spring point of that channel may be acupunctured in order to drain the Heat. For example, Damp-Heat in the back of the throat may be treated by bleeding Yunmen LU 10 (Ying-spring) since the Lung channel has an internal channel that traverses the throat. If the Slippery quality is due to Damp combined with Heat in an organ, broad immune system supporting acupuncture points such as Quchi LI 11, Dazhui GV 14, Yinlingquan SP 9 and Waiguan TH 5 may be chosen along with points to benefit that organ. Many excellent TCVM herbal formulae exist to treat both Damp (Wu Ling San or Five Ingredient Powder with Poria; Wu Pi San or Five Peel Powder) and Damp-Heat (e.g. San Ren Tang or Three Nut Decoction). Remember when using the herbal formulae it is imperative that the pattern is differentiated to the channel or organ level rather than just “Damp” or “Damp-Heat”.

Yin Deficiency with a tight pulse is usually due to either relatively superficial dryness of the Lungs and Stomach or deeper and chronic disorders of the Liver and Kidney. The Yin of the Kidneys and Liver serves as the basic reserve of Yin for the entire body. Acupuncture at San Yin Jiao SP 6, Taixi KI 3, Tai Chong LIV 3, and Shen Shu BL 23 can benefit the Yin. The classic TCM herbal formula to enrich the Yin and nourish the Kidneys is Six Ingredient Pill with Rehmannia (Liu Wei Di Huang Wan). Yin deficiency is commonly seen with (Western) kidney disorders and geriatric problems. We also see Yin deficiency in such cases as feline hyperthyroidism.

Blood Stasis with a choppy pulse is one of three basic categories of disorders of the Blood in TCM that includes Blood Deficiency and Blood loss. Remember that in this case we are referring to Blood Excess when we speak of Blood Stasis. Blood Stasis can lead to a reduction in the production and circulation of Blood. Blood Stasis in the channels may be treated with acu-
puncture by opening the channel involved as well as treating Ah Shi points and Xi-Cleft points. Internal organ Blood Stasis must be differentiated in order to select the proper TCM herbal formula. If there is only a broad diagnosis of Blood stasis in the channels or organs, the TCM patent formula Yunnan Baiyao (sometimes sold as Yunnan Paiyao) may be used. Yunnan Baiyao primarily contains San Qi Panax notoginseng which stops bleeding and transforms Blood Stasis as well as reduces swelling and alleviates pain.

Blood Deficiency with a thin pulse is common in geriatric animals suffering from renal failure and any animal that has suffered from parasites or chronic malnutrition. Blood loss is one the most common etiologies of Blood Deficiency. Although tonifying acupuncture may be used at Ge Shu BL 17, Dan Shu BL 19, Pi Shu BL 20, Xue Hai SP 10, and Shenmen HT 7, food and herbal therapy is more effective in reversing Blood Deficiency. The classic TCM formula to tonify the Blood and regulate the Liver is Four Substance Decoction (Si Wu Tang).

Yang Excess with a pounding pulse is commonly seen in febrile disorders or conditions of Heat excess in an organ. As mentioned above, Heat can be drained from a channel by acupunctureing the Ying-Spring point on that channel. For example, a cat with a gingivitis/stomatitis and a diagnosis of Heat in the Stomach Channel may be treated by needling the Stomach Channel Ying-Spring point, Neiting ST 44. Bleeding a few drops of blood from Er Jian (Ear Tip) and Wei Jian (Tail Tip) may also be used to non-specifically Clear Heat from a patient with Yang Excess. Heat can be found in the channel or organ as with Yangming (Six Stages) disorders. With proper differentiation, there are many TCM herbal formulae from which to choose to treat conditions of Heat excess discovered by finding a pounding pulse. For example, external Wind-Heat may be cleared with Yin Qiao San, Honeysuckle and Forsythia Powder; Heat from the Ying (Nutritive) and Xue (Blood) level may be cleared with Qing Ying Tang, Clear the Nutritive Level Decoction. For severe infections that lead to a pounding pulse, we should also be willing to choose an appropriate antibiotic if necessary.

Yang Deficiency with a deep pulse is most commonly seen in geriatric animals and debilitated animals. A number of acupuncture points may be helpful in tonifying the Yang (e.g. Mingmen DU 4), but it is most important to use warming treatments such as Moxibustion. Herbal formulae are based upon the Kidneys being the gate of vitality and the foundation of the body’s Yang. The classic formula to warm and tonify Kidney Yang is Kidney Qi Pill from the
Golden Book (Jin Gui Shen Qi Wan). Yang deficiency may also be found in the Lungs and Spleen, so once again complete Pattern Differentiation is important when choosing an herbal formula.

Qi Excess with a taut pulse commonly leads to Qi stagnation. Since the Liver is the primary organ to control the free flow of Qi in the body, Qi stagnation almost always involves the Liver. Acupuncture points such as Taichong LIV 3, Gan Shu BL 18, Ximen LIV 14, and Hou San Li ST 36 are important to facilitate the smooth flow of Qi. The classic TCM herbal formula to spread the Liver Qi is Bupleurum Powder to Spread the Liver (Chai Hu Shu Gan San), although there may be other factors involved in Qi Stagnation.

Qi Deficiency with a weak pulse can be found in many organs but the classic case is that of Spleen Qi deficiency. This is usually due to improper eating habits (species-inappropriate foods), excessive deliberation, overwork, and may occur in the geriatric or debilitated animal. Depending upon the presentation, a tonifying acupuncture treatment with points such as Pi Shu BL 20, Guan Yuan Shu (human Wei Shu) BL 21, or Hou San Li (human Zu San Li) ST 36 may be used. The basic TCM herbal formula which tonifies the Qi and strengthens the Spleen is Four Gentlemen Decoction (Si Jun Zi Tang).

CONCLUSION

Each body sends constant signals as to its emotional and physical well-being. Palpating the pulse is one way in which we assess these signals and the energetic status of our patients. If we are able to simply differentiate the Yang and Yin energetic qualities of a pulse and the Qi and Blood vital substances of that pulse, we may differentiate the Pattern of Disharmony of a body. With such a differentiation, it becomes easier for us to choose a rational treatment strategy to benefit the living creatures that we love to help.
<table>
<thead>
<tr>
<th>Color of tongue body</th>
<th>TCVM Indications</th>
<th>Western Biomedical Indications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pale</td>
<td>With wet tongue: Qi Deficiency</td>
<td>anemia, general weakness, gastrointestinal weakness, immunodeficiency</td>
</tr>
<tr>
<td></td>
<td>With dry tongue: Blood deficiency</td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td>Heat, Excess Heat, Excess</td>
<td>Inflammatory diseases, infections, fever, psychological aberrations, thermoregulatory flaws</td>
</tr>
<tr>
<td></td>
<td>red @ tip: Heart Fire</td>
<td></td>
</tr>
<tr>
<td></td>
<td>red @ sides: Liver Heat/Fire</td>
<td></td>
</tr>
<tr>
<td>Deep Red</td>
<td>Heat with Yin deficiency</td>
<td>Dehydration, chronic inflammation</td>
</tr>
<tr>
<td></td>
<td>Severe Heat, Yin Deficiency</td>
<td></td>
</tr>
<tr>
<td>Purple</td>
<td>Qi/blood stagnation, Cold</td>
<td>Pain, poor circulation, heart failure, tense tissues</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yellow</td>
<td>Lusterless: Damp, Spleen Deficiency</td>
<td>Liver problems, chronic gastrointestinal disorders</td>
</tr>
<tr>
<td></td>
<td>Bright: Liver Damp-Heat</td>
<td></td>
</tr>
<tr>
<td>Coating</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thin: Exterior Pattern, Wind-Cold,</td>
<td>Early viral infections, food retention, indigestion, chronic GI disorders</td>
</tr>
<tr>
<td></td>
<td>Thick: Cold, Cold-Damp, phlegm</td>
<td></td>
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<tr>
<td></td>
<td>Yellow</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heat, Excess Heat</td>
<td>Inflammatory diseases, infections</td>
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<td>Grey black</td>
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<td>With dry tongue: Heat, Yin deficiency</td>
<td>Chronic inflammatory diseases, chronic illness, renal failure, cardio-vascular disease</td>
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<td>With wet tongue: Yang deficiency, Cold</td>
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<td>Dry</td>
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<td>Yin Deficiency, blood deficiency</td>
<td>body fluid deficiency, anemia</td>
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<td>Qi Deficiency, Yang deficiency</td>
<td>General weakness, water retention diarrhea, edema, GI weakness</td>
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<td>Damp-Cold, Water-Damp</td>
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<td>Sticky</td>
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<td>Phlegm, Damp, Food Stasis</td>
<td>Chronic gastrointestinal disorders</td>
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<td>Crusty</td>
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<td>Indigestion, Food retention, Phlegm</td>
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<td>Tongue Shape</td>
<td>Swollen</td>
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<td>And pale in color: Kidney Yang Deficiency</td>
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<td>And red in color: Extreme Heat Pattern</td>
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<td>Soft/small</td>
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<td>For a life time: Kidney Jing Deficiency</td>
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<td></td>
<td>And pale in color: Qi or/and Blood deficiency</td>
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<td></td>
<td>With tremor motion: Internal wind, Severe Deficiency of Qi/Yang/Blood</td>
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References


INTRODUCTION

Around 1.4 million people were predicted to have cancer, and more than half a million could have died due to cancer or cancer related complications in the United States in 2008. In companion animals, the incidence of animal cancer and the cancer related death rate has been increasing for the last several decades. Many features of cancer in dogs are similar to human features including histopathological signs, tumor genetics, molecular targets, and biological behavior. In addition, many techniques used for animal cancer therapy such as chemotherapy, surgical process or radiation therapy were adopted from human cancer therapy. Lindblad-Toh K, et al reported a high-quality draft genome sequence of *Canis familiaris* and a dense map of single nucleotide polymorphisms across breeds. This information of the canine genome sequences strongly suggested the similarities with the human one.

Veterinary oncology has become a significant field in veterinary medicine because cancer became one of leading causes of mortality in animals, like human. Thirty to forty percent of geriatric dogs and cats have a chance to get cancer during their life time. There are two types of neoplastic transformations - hereditary and sporadic. Although cancer has been known as genetic diseases, hereditary factors are responsible for 5% of cancer outbreak in humans, and the other 95 % develops cancer sporadically during one’s lifetime. The acquired gene mutation in sporadic cancer outbreak could be triggered by a variety of factors including microbes (tumor virus, parasite, fungus, and bacteria), environmental contamination (chemicals, heavy metals, radiation, and ultraviolet radiation), unhealthy diet, irregular lifestyles and emotional stress. Malignant neoplasm is an uncontrolled cell proliferation due to the defective responses to anti-mitogenic signals to the constitutive mitogenic signaling or abnormal apoptosis. In addition, genomic and chromosomal instability lead numerical changes in chromosome resulting in tumor progression and acquisition of aggressive phenotypes. An extensive body of literature has been published on the mechanism, etiology, and therapeutic options of cancer.
Cancer prevention has been emphasized in both Oriental Medicine and conventional medicine oncology. The Center for Disease Control and Prevention (CDC) published the guidelines for the comprehensive cancer control program as an integrated and coordinated approach to reducing cancer incidence, morbidity and mortality through prevention (primary prevention), early detection (secondary prevention), treatment, rehabilitation and palliation. Early detection is the most critical factor for having a good prognosis for both humans and animals. National Canine Cancer Foundation (NCCF) provided the ten early warning signs for canine cancer as follows:

1. Sores that do not heal
2. Weight loss
3. Loss of appetite
4. Bleeding or discharge from any body opening
5. Offensive odor
6. Difficulty eating or swallowing
7. Hesitation to exercise or loss of stamina
8. Persistent lameness or stiffness
9. Difficulty breathing, urinating, or defecation
10. Abnormal swellings that persist or continue to grow

The universal cancer treatments for animals are chemotherapy, radiation, and surgical therapies in conventional medicine. Selection of therapeutic options depends on the types and stages of cancer. Selected therapeutic methods and individual condition are significant factors to affect efficacy of treatment including remission duration, survival rate and clinical signs. Adverse effects from conventional therapies have hampered continuing the treatment as well as the patient’s quality of life. Therefore, the management of adverse effects is a prime consideration of conventional therapies.

OVERVIEW-ORIENTAL MEDICINE ONCOLOGY

The concept, etiology, and pathogenesis in Oriental Medicine oncology are different from those in conventional oncology. In Oriental Medicine Oncology, cancer {암(Amm), 癌(Liu)}, is neither a new emerging disease nor a modern ailment. The word Liu (癌) was found on an oracle bone in the Yin dynasty (BC 1700 – 1100) and etiology and the pathogenesis of liu has been
cited in several classical books and references. Amm (Korean) or Liu (Chinese) is indicated as a hard mass or irregular form of phlegm accumulation in the body in ancient Oriental Medicine. Other terms have also used to denote tumor including jing, ga, jeok, chui, and ilgeok that showed similar symptoms and clinical signs as cancer or tumor in conventional medicine oncology. Hur Jun (1539 -1615), a Korean Oriental Medical doctor in the Choseon dynasty, elucidated the definition and therapeutic options of cancer in his book, *Dong Eui Bo Gam* (1596 -1610). Dr. Hur Jun also explained and distinguished various kinds of tumor depending on the location, clinical manifestation, their characteristics and prognosis. He mostly applied Korean herbs for cancer treatment.

Although there is not a definitive etiology/pathogenesis in conventional and Oriental Medicine oncology yet, Qi deficiency is generally accounted as a primary predisposed condition in Oriental Medicine oncology. Therefore, tonifying Qi is the foremost principle for cancer therapy. In classical Oriental Medicine oncology, dietary therapy, herb therapy, acupuncture, Tui-na (in Chinese) or Chu Na (in Korean), moxibustion and physical/mental exercise are used for major cancer therapeutic modalities. Particularly, cancer treatment in Oriental Medicine is based on the individual pattern differentiation. Therefore individual pattern differentiation is the essential procedure in Oriental Medicine Oncology.

The use of Complementary and Alternative Medicine (CAM) has tremendously increased for a couple of decades. Since the mainstream medical community has carefully and slowly embraced CAM as another branch of medical option for cancer therapy, obtaining the scientific evidence of treatment options including acupuncture, herbal therapy, Tui-na, moxibustion and food therapy would be beneficial for proper application. Despite tremendous quantity of accumulated clinical data for a long history of Oriental Medicine, the lack of the scientific evidence based on Western scientific dogma has been a drawback to the acceptance of Oriental Medicine as a CAM modality by mainstream physicians. Since the Oriental Medicine theory, particularly pattern differentiation theory, has a complexity difficult to fit into Western scientific dogma, contradictory outcomes on the efficacy of acupuncture and herbal therapy for cancer treatment have been obtained. Cho et al adopted fMRI to evaluate acupuncture effect for two opposite groups, i.e. one was a Yang person group the other a Yin person group. fMRI showed the opposite time kinetic visual cortex activation in response to BL 67 acupuncture between the Yang
type group and Yin type group. It indicated that pattern differentiation should be applied for Western scientific experiment to approve the efficacy of acupuncture or herbal therapy. If Oriental Medical concept applies to scientific experiment, more reliable data would be obtained. However, this concept is largely rejected by scientists or research groups at present. The primary reason would be that the pattern differentiation theory is far beyond the conventional medicine dogma.

Recently tremendous effort has made for integrating Western and Oriental Medicine because each medical modality has its own merits and shortfalls. As a consequence, Oriental Medicine is gradually integrating into Western medicine and it would provide potential cancer therapeutic options to Western society.

ACUPUNCTURE FOR CANCER THERAPY

1. Primary principle of acupuncture for cancer patients. Substantial studies have been published on the effect and the application of acupuncture for cancer treatment. Four hundred years ago, Dr. Hur Im, a famous acupuncturist in the Choseon dynasty (1392-1910) in Korea used Tonification/Elimination (Bo Sa Bup in Korean) method of acupuncture treatment for cancer patients which is still used by modern Oriental Medicine oncologists. However, the critics due to the lack of its scientific evidence and the requirement of highly skillful techniques/knowledge have been a drawback for the application of acupuncture in cancer therapy. Recently, many studies have been published on the effectiveness of acupuncture for cancer treatment. Wu et al\(^9\) reported that acupuncture enhanced the cellular immunity of patients with malignant tumor by increasing the percentage of T lymphocyte subsets CD3+, CD4+ and the CD4+/CD8+ ratio (P < 0.01) and the level of beta-EP, as well as decrease the level of SI L-2 R (P < 0.01). Lai et al\(^10\) investigated the immunomodulation effect of acupuncture in Zusanli (ST 36), Hegu (LI 4) and Sanyinjiao (SP 6) on rats using Walker-256 cell strain. The result showed that there were significantly smaller gross tumor volumes, increased level of IgG, IgM and C3, and increased CD4+ and CD4+/CD8+ in the rats which received electroacupuncture versus the control group. Acupuncture could also activate immune functions by increasing blood cell count and NK cell activity.\(^9,11,12\) In contrast, controversial studies have also been published.\(^9,12\)

Acupuncture treatment could be applied as a complementary cancer therapy for alleviating clinical symptoms or adverse effects generated from conventional therapies. In spite of
some controversial data, the effect of acupuncture has been widely accepted for alleviating chemotherapy related adverse effects including pain, vomiting, nausea or anorexia. Studies showed that acupuncture significantly alleviates emesis and pain for patients receiving chemotherapy, and lethargy from post-chemotherapy. Electro-acupuncture has also demonstrated benefits for acute vomiting due to chemotherapy and controlling general pain. The National Institutes of Health Consensus Development Conference has finally accepted acupuncture as a CAM modality for nausea, pain and vomiting generated from chemotherapy. Unfortunately, acupuncture therapy is still held back as a complementary medical option for cancer therapy.

2. Summary of acupuncture efficacy
   a) Analgesic effect to diminished pain generated by cancer
   b) Immunosuppression related to cancer
   c) Alleviating the gastrointestinal discomfort of chemotherapy including nausea, vomiting, pain, anorexia and diarrhea
   d) Alleviating the general adverse symptoms due to conventional therapy such as lethargy, insomnia and dyspnea
   e) Alleviating the side effects due to radiation therapy; Xerostomia

In conclusion, we need to further investigate the safety, mechanism, and efficacy of acupuncture for cancer therapy. Once we gain enough evidence on the efficacy of acupuncture, we could integrate acupuncture treatment with conventional treatment for cancer patients.

MEDICINAL HERBS FOR CANCER THERAPY

Overview. More than 80 % of cancer patients use some form of CAM therapy. As many as 63 % of cancer patients use herbal therapy. Currently, clinicians and scientist have considerable interest to find anticancer herbs because an extensive body of research has provided the evidence of anticancer effects including the induction of apoptosis, differentiation/enhancing the immune system, and inhibiting angiogenesis. In addition, clinical studies demonstrated that anticancer herbs could improve survival rate, the quality of life, or alleviate side effects caused by conventional therapies. The increased use of herbal therapy is also seen in animal cancer patients. Although herbs have potential as anticancer agents, controversial and limited information on the safety, effectiveness, and herb-drug interaction have been a drawback for their application. Since the safety and efficacy of herbal therapy for cancer treatment have been issued by main
stream clinicians as well as patients, the feasibility of medicinal herbs for cancer therapy should be carefully studied and discussed.

In cancer therapy, there are two categories of anticancer substances i.e. natural plant (medicinal herbs) and chemotherapy drugs. Chemotherapy has been used for cancer therapy with varying degrees of success. Chemotherapy drugs are categorized as alkylating agents, antimetabolites, anthracyclines, antitumor antibiotics, monoclonal antibodies, platinums or plant alkaloids. Some chemotherapy drugs are extracted from plants. The application, efficacy of chemotherapy drugs and their adverse effects have been extensively studied. Adverse effect from chemotherapy drugs has occasionally been responsible for holding or stopping its use in treatment. In spite of tremendous studies on the conventional cancer therapies, ambiguous efficacy and the adverse effect of chemotherapy, surgery, or radiation therapy are still considerations for patients as well as clinicians.

Medicinal herbs have been accepted as a prime therapy for cancer treatment in ancient Oriental Medical doctors for thousands of years. Many active ingredients or compounds from medicinal herbs have been investigated for their anticancer effect. Today, medicinal herbal therapy is considered as an integrative medical modality for cancer therapies.

1. Principle of Herbal Medicine for Cancer Therapy. The theory of Oriental Medicine has been applied for cancer therapy in Oriental Medicine oncology. Particularly, individual pattern differentiation of a cancer patient is the essential procedure which is accomplished by four general diagnosis methods. In addition, modern Oriental Medicine oncology has embraced and utilized Western Medicine diagnosis such as imaging techniques, clinical pathology, laboratory tests and others. Therefore, better diagnosis can be done by the integration of medical virtues from Western and Oriental Medicine. As a consequence, cancer patients as well as oncologists are able to select appropriate therapeutic options and this would increase the survival rate as well as improve the quality of life for cancer patients.

Pattern differentiations include general patterns and individual patterns in Oriental Medicine oncology. There are five general pattern differentiations which are (1) deficiency of Qi and blood, (2) toxic heat accumulation, (3) stagnation of Qi, blood and phlegm, (4) deficiency of Yin and (5) deficiency of Yang. Each individual could have single or a mixture of general pattern
differentiation with/without a unique individual pattern differentiation, therefore an herbal prescription for one patient might not be applicable for the other.

The principle of the herbal therapy for general pattern differentiation is followed by the fundamental theory of Oriental Medicine herbology. The herbs based on general patterns would be selected for (1) tonification of Qi and blood, (2) elimination of toxic heat, (3) relieving stagnation of Qi, blood and phlegm, (4) nourishing Yin and (5) nourishing Yang.

**Qi and blood tonic herb:** The fundamental pathogenic factor for cancer in Oriental Medicine oncology is the Qi deficiency. Deficiency of Qi would lead eventually to blood deficiency. Therefore, selecting Qi and blood tonic herbs would be beneficial. The Qi and/or blood tonic herbs would affect NK cell activity, Th/Tc cell ratio, synthesis of anti tumor cytokines, and regulate cancer cell growth cycle.\(^{30}\) Huang Qi, Ren Shen, Dang Shen and Dang Gui would be the chief herbs for the boosting of Qi or blood.\(^{24,31,32}\)

**Herbs for clearing toxic heat:** In many cases, toxic heat accumulation is a major pathogenesis for cancer. The herbs for eliminating toxic heat would have effects on regulating cAMP level, DNA/RNA synthesis of tumor cell, suppressing the mutation and growth of cancer. Many herbs in this group can stimulate not only immune functions but also have antibiotic, antitoxic, and anti-inflammatory properties.\(^{31,33}\) The herbs used for elimination of toxic heat include Bai Mao Gen, Bai Hua Se Se Cao, Ban Zhi Lian, or Qing Huo.\(^{31}\)

**Herbs for dissolving phlegm:** In general, hard mass or tumor can be generated by the Phlegm-heat accumulation or Phlegm-cold accumulation, accompanied with/without Qi/blood stagnation. Herbs in this group have mainly effects on shrinking and dissolving tumor. These herbs also can alleviate tumor related pain, control the metastasis, and invigorate blood circulation. Common herbs for this group are San Lung, E Zhu, San Qi, Dang Gui, Dan Shen, and Chuan Xiong.\(^{31}\)

**Herbs for nourishing Yin/Yang:** Lastly Yin and Yang imbalance would be manifested in progressed stage of cancer. Yin deficiency is a common phenomenon in many late stage cancer patients. Most cancer patients who received chemotherapy, radiation therapy or surgery may develop Yin deficiency eventually. Herbs that belong to this group would be used as complementary therapy to regulate the growth of tumor cells and to maintain the homeostatic stage of the body. The herbs for nourishing Yin include Sha Shen, Tian Man Dong, Mai Man Dong, Sheng Di, and Shu Di.\(^{31}\) The major role of Yang is supporting the immune system, endocrine
system, and nourishing bone and marrow. Herb for nourishing Yang would be used in late stage of lung, stomach, liver, breast, or prostate cancer where hormonal dysfunctions may be the primary concern. Nourishing Yang can also combine with nourishing Yin therapy to alleviate adverse effects from chemotherapy or radiation therapy. Nourishing Yang herbs can increase antibody production, regulate macrophages, increase T-cell function, suppress the mutation of tumor cells, promote the proliferation of bone marrow, and regulate the neuro-endocrine system. Nourishing Yang herbs are Dong Chong Xia Cao, Yin Yang Huo, Xian Mao, Suo Yang, Rou Cong Rong, Ba Ji Tian, Bu Gu Zi, Gou Ji, and Tu Si Zi.\textsuperscript{31}

The prescription of herbs should be followed the theory of Oriental Medicine Herbology. The herb prescription is also modified based on the progress and improvement of each patient. Therefore, physical examination as well as other relevant diagnostic tests should be performed regularly

2. Herb-Drug Interaction. The largest body of information has documented the contraindication of herb to herb or herb to conventional drug.\textsuperscript{25, 31} Since the use of herbal therapy has been increasing amongst cancer patients, the herb-conventional therapy interaction has been greatly considered. Certain herbs showed extensive interaction with drug metabolizing enzymes or drug transporters. In-vitro studies revealed that herbs affect several isoforms of the cytochrome P450 gene (CYP) family either via interaction, induction or inhibition.\textsuperscript{25} Since these enzymes could eliminate various anticancer drugs, a patient with chemotherapy would have serious clinical complication. Therefore herbs that show the contraindication with conventional therapy such as chemotherapy, surgery or radiation therapy should be avoided.

Here are several examples of the contraindication of herb with conventional drugs.\textsuperscript{25} Ginkgo showed contraindication with camptothecins, cyclophosphamide, epidermal growth factor receptor tyrosine-kinase (EGFR-TK) inhibitors, epipodophyllotoxins, taxanes, and vinca alkaloids (CYP3A4 and CYP2C19 inhibition), alkylating agents, antitumor antibiotics, and platinum analogues (free-radical scavenging). Echinacea has contraindications with camptothecins, cyclophosphamide, EGFR-TK inhibitors, epipodophyllotoxins, taxanes, and vinca alkaloids (CYP3A4 induction). Ginseng would have a contraindication with camptothecins, cyclophosphamide, EGFR-TK inhibitors, epipodophyllotoxins, taxanes, and Vinca alkaloids (CYP3A4 inhibition). Ginseng could stimulate tumor growth for estrogen-receptor positive
breast cancer patients and endometrial cancer patients. Kava showed a contraindication with pre-existing liver disease or hepatotoxic chemotherapy because it could further injure the liver. Kava also has contraindication to camptothecins, cyclophosphamide, EGFR-TK inhibitors, epipodophyllotoxins, taxanes, and vinca alkaloids (CYP3A4 induction). Valerian should be used cautiously with tamoxifen (CYP2C9 inhibition), cyclophosphamide, and teniposide (CYP2C19 inhibition). Echinacea is an immune stimulant, thus it is contraindicated for patients with autoimmune diseases such as lupus or HIV/AIDS. Echinacea should be avoided with radiation or chemotherapy.\textsuperscript{25}

Since the drug-herb interaction has not been fully investigated, I suggest stopping or minimizing the administration of herbs 3 to 5 days before and after conventional therapy especially chemotherapy.

3. The Combined Herb-Acupuncture Therapy for Cancer Treatment. A body of studies showed the effect of combined techniques of herbal extract with acupuncture treatment in Oriental Medicine oncology. Historically Melittin+ acupuncture has been applied for alleviating pain and inflammation in arthritic condition. Due to hypersensitive reaction to a certain individual, it has not been accepted as a general medical option. Yun and Song\textsuperscript{34} reported that Melittin + acupuncture have an inhibitory effect against prostate cancer cell PC-3. Loricera flos herbal +acupuncture also showed anticancer effect on B15-F’0 (KCLB 80008) mouse melanoma cell and A 549 human lung cancer cell in vitro experiment.\textsuperscript{35} Affirmative results obtained from other kinds of herbal extracts administered through acupuncture points have also been investigated.\textsuperscript{34,35} For future application, further investigation on the efficacy and safety on the combination of herbal extract with acupuncture treatment should be attained for cancer therapy.

**ORIENTAL MEDICINE ONCOLOGY – PATHOGENESIS**

The etiology and pathogenesis of cancer have been investigated and many cancer theories have been reported in conventional medicine oncology. In 1902, John Beard, a Scottish embryologist suggested that the Trophoblast Cell Theory, where he claimed that replacing pancreatic enzyme including trypsin and the chemotrypsin, could cure fast-growing cancers.\textsuperscript{36} But clinical trial did not provide the evidence of this theory. Warburg’s theory that cell damage caused by impairment to energy metabolism in its mitochondria could generate cancer was proved by another researcher.\textsuperscript{37} Otto Aichel’s leukocyte fusion theory of
cancer metastasis explained that a hybrid of the cancer cell and normal white blood cell could take the natural migrating property of white blood cells and the uncontrolled cell growth property from cancer cells. This causes a metastatic cell to migrate to other organs and generate a tumor. This theory has been elucidated again by Pawelekk and Chakraborty. Dr. Charles Cobbs’s viral cancer theory suggested that malignant brain cancer might be caused by a ubiquitous virus such as cytomegalovirus and herpes virus which infect 4 out of 5 Americans. Mutator hypothesis explained that the accumulation of genetic mutation by genetic instability would generate malignant cells. Our body’s repair system corrects the loss of normal cell-cycle, persistent DNA damage or telomere dysfunction due to genomic instability. Tumor-suppressor protein p53 prevent tumor formation. However the mutation of TP53 is the most commonly found mutation in human cancer. Besides above mentioned theories, many other cancer theories have claimed the pathogenesis and pathophysiology of cancer, and some are still on the way to being proven.

Etiology of cancer in Oriental Medicine Oncology. There are two etiologic types of cancer i.e. hereditary and sporadic cancer, which originated from innate defected gene(s), and acquired chromosomonal mutation respectively. Common etiological factors for cancer would be categorized into two parts; external or internal factors in Oriental Medicine oncology. Exogenous factors could be the primary or secondary triggers for cancer. The etiology of cancer would be congenital constitution (genetic defect), abnormal life style including diet, overexertion, exogenous pathogens, prolonged illness, aging, and polluted or contaminated environment.

Exogenous pathogenic factors would be primary or secondary causes of cancer in Oriental Medicine. The common exogenous pathogens include Wind, Cold, Dampness, Dryness, and Heat/Fire. Wind is a Yang pathogenic factor and the prime guide for other pathogenic factors, which would easily attack the upper part of the body, but also the whole body. Cold is a Yin pathogenic factor and easily damages the Yang Qi. Dampness is a Yin pathogenic factor and easily damages Yang Qi and blocks the Qi mechanism. Dryness is a Yang pathogenic factor and easily damages body fluid. Fire/toxic heat is a Yang pathogenic factor, easily scorches fluid and generates wind stirring the blood. Tumor triggered by microorganisms, prolonged exposure to chemicals and heavy metals will be categorized into toxic heat/fire.

Endogenous pathogenic factors either from the innate constitution or adopted constitution would be a substantial underlying cause for cancer and can be exaggerated by external or internal
pathogenic factor(s). Prolonged emotional stress and inappropriate diet are also common etiologic factors for cancer. Qi deficiency is the fundamental cause of cancer that leads to blood deficiency. Prolonged deficiency of Qi, blood or both would weaken individual defense system and eventually result in the stagnation of Qi and blood. The harmony of Yin/Yang would show physiopathologic change as the disease progresses. Yin and Yang are bipolar energies, which is the fundamental backbone of the body system. The body is constantly working to keep homeostasis between Yin and Yang and disharmony of Yin and Yang would be a one of prime causes for cancer. Six Yin (Zang) organs and six Yang (Fu) organs have a close interrelationship with each other and control each other constantly. Yin organs store essence and Qi in general. The Yang organs have transforming and transporting function. The imbalance in Zang Fu organs might affect the neuro-endocrine system as well as the immune system. Therefore a persisting imbalance among them would be a causative factor for neoplasia. In modern Oriental Medicine oncology, like ancient TOM, emotional strain has been emphasized as a critical factor for imbalance of Yin and Yang harmony and other interrelationships among organs. Protracted emotional response can cause the imbalance of Zang Fu organs directly or indirectly. Emotion arises from external stimuli or intrinsic factors of individuals. Seven types of emotions including joy, anger, worry, pensiveness, sadness, fear and fright arise constantly in the body as a result from reactions to trigger factors.

In ancient Oriental Medicine Oncology, diet was regarded as the major etiologic factor. Dietary therapy in Oriental Medicine is a core medicinal modality applied to any kind of illness. Sasang Constitutional Medicine (SCM) theory which was created by Dr. Lee Je-Ma (1837 – 1900, Choseon dynasty in Korea) classified four main constitutions based on mind, body, activity and matter of individual, and emphasized the food therapy based on individual constitution for prophylactic as well as therapeutic purpose. The dietary therapy based on SCM has been applied for cancer prevention and therapy in Korea for more than 200 years.

*Pathogenesis of cancer in Oriental Medicine oncology.* The fundamental definition of diseases/disorder in Oriental Medicine would be the struggle between Zheng Qi (Righteous Qi) and pathogenic Qi (Evil Qi). Spiritual Pivot in chapter 44 says: "The occurrence of all diseases must be related with dryness, dampness, cold, heat, wind, sexual intercourse, joy, anger, diet, and living place. When the pathogenic Qi meets with the Zheng Qi, they start to fight each other." If
Zheng Qi is weaker than pathogenic Qi, then diseases will arise. The diseases are then named by the pattern differentiation according to six pathogens, Zang Fu, four substances, eight principles, five elements, or six meridian theories. The Zheng Qi provides the functional activities of the body, prevents disease, fights against pathogenic Qi, and repairs injured tissues or organs. The pathogenic Qi would be various harmful factors including six pathogens, seven emotions, pestilential evils, and many other pathogens surrounding individuals. Therefore, disease is the process of struggle between Zheng Qi and pathogenic Qi. Depending on the strength of each Qi, the prognosis of disease would be determined.

The fundamental cause of cancer is the Qi deficiency. Based on this theory, if Zheng Qi is stronger than Evil Qi or evil Qi is weaker than Zheng Qi, the body would remain in healthy status. Chapter 72 in Plain questions says: "When the genuine-Qi keeps itself inside the body, the evil Qi will be unable to attack." When Zheng Qi is weaker than pathogenic Qi, the body would be attacked by pathogenic Qi resulting in disease status. Although the strength of Zheng Qi plays a major role protecting body from invasion of pathogenic Qi, the strength of pathogenic Qi would be considered in pathogenesis in Oriental Medicine. Although Zheng Qi is healthy and strong, Evil Qi is even stronger than Zheng Qi, for examples burns, insect bites, or traumatic injury, the pathogenic Qi depresses the Zheng Qi resulting in diseases or disorders. Therefore etiology, pathogenesis and pathophysiology of the disease should be clearly addressed for the pattern differentiation in Oriental Medicine oncology.

Cancer (Amm or Liu) has also been a complicated disorder to be treated in Oriental Medicine. Etiology, pathogenesis and physiopathology of cancer (Amm or Liu) have been discussed in ancient and modern Oriental Medicine Oncology. Beside Qi deficiency as the fundamental pathogenesis of cancer, the invasion of the stronger pathogenic Qi is critical factors in modern Oriental Medicine oncology because of tremendous toxic chemicals, heavy metal contamination, improper medical treatment, and excess socio-environmental pressure.

The general pathogenesis of cancer is categorized into Qi stagnation, toxic heat/fire, phlegm accumulation, Yin/Yang imbalance and/or blood stasis. Treatment or prevention of cancer in Oriental Medicine should be performed based on the individual pattern differentiation as well.
SELECTED ANIMAL CANCER CASES

Animal cancer is identified based on the origin, location, and stages in conventional medicine oncology. There are five classification of animal cancer based on it origins, like human cancer, including sarcoma, carcinoma, lymphoma, myeloma and leukemia in conventional medicine oncology. Sarcomas are muscle, bone and connective tissue tumors which derived from mesoderm. Carcinoma is originated from the endoderm or the ectoderm. Lymphoma is the lymph gland tumor, leukemia is the cancer formed in blood and bone marrow, and myeloma is generated in the antibody-producing plasma cell or hemopoietic cells in bone marrow.

Classification of animal cancer in Oriental Medicine oncology would be achieved by pattern differentiation based on the fundamental theory of Oriental Medicine. Furthermore, modern Oriental Medicine oncology has adopted Western medicine diagnosis such as imaging techniques, clinical pathology, and other relevant laboratory tests.

CASE 1

Gender/Breed/Age: Female spayed/golden retriever/10yrs old
Western diagnosis: Stage III T cell lymphoma
Clinical signs: Swollen lymph node, loose stool, lethargy, mild anorexia, vomiting, abnormal behavior and restlessness
Western Medical Treatment: Chemotherapy (L-asparaginase, vincristine, cyclophosphamide, doxorubicin, prednisone)
Results: Out of remission 4 months after 1st course of chemotherapy completed
Oriental Medicine diagnosis: Phlegm-Heat accumulation with Spleen Deficiency.
Tongue profile: Redder tongue body in color and purplish color on the tongue tip area with yellow greasy, moisture tongue coating.
Pulse pattern: Moderate deep, slippery, irregular, hurried

Treatment in Oriental Medicine Oncology

Dietary therapy: Fish based diet with vegetable and legume
Herb therapy: Herb decoction was extracted from the prescription containing Ban Xia, Fu Ling, Chen pi, Bai Shao, Qing Huo, Ban Zhi Lian, Shan Yao, Mu Dan Pi, Huang Qi, Dang Shen, Kun Bu, He Zao, Bai Zhu, Dang Gui, Xia Gu Cao, Chai Hu,
Sheng jiang, and Gan Cao. The herb decoction was administered orally twice daily for 60 days.

*Acupuncture:* N/A

**Results:** Karnofsky Performance was improved from 40 to 80 one week after herbal therapy and the duration of remission was increased from 6 months to 2.5 years.

**CASE 2**

**Gender/Breed/Age:** Male neutered/domestic short hair feline/13yrs old

**Western diagnosis:** Low grade small cell lymphoma

**Clinical signs:** The cat has had loose stool to diarrhea for several months after teeth cleaned. He used to have constipation with large stool before this happened. He had developed lethargy and showed no appetite, however no vomiting observed. Urination was normal.

**Treatment:** Prednisone, metronidazole

**Results:** No improvement

**Oriental Medicine diagnosis:** Lymphoma due to Liver/Kidney deficiency

**Tongue profile:** Redder tongue body color with little tongue coating

**Pulse pattern:** Deep, rapid, thin and choppy

**Treatment in Oriental Medicine Oncology**

**Dietary therapy:** Fish based diet

**Herbal therapy:** Herb decoction was extracted from the prescription containing Shu di huang, Shan Zhu Yu, Shan Yao, Fu Ling, Mu Dan Pi, Ze Xie, Zhi Mu, Huang Bai, Huang Qi, Ren Shen, Bai Zhu, Zhi Gan cao, Dang Gui, Sheng Ma, Chen Pi, Chai Hu, Bai Shao, Sheng Jiang, and Gan Cao. The herb decoction was administered orally twice daily for 20 days.

**Acupuncture:** LI 11, ST 36, 25 BL 17, 18, 20, 23, 31, GV 4, KID 3, LIV 3 (once a week for 3 weeks)

**Results:** Diarrhea stopped 1 week after herbal and acupuncture treatment applied. Karnofsky Performance was improved from 50 to 90, appetite become normal and still is in the remission (around 4 years).
CASE 3

**Gender/Breed/Age:** Male neutered/canine retriever/13yrs old

**Western diagnosis:** Stage II osteosarcoma on the right front limb

**Clinical signs/history:** In July 2002, he was diagnosed with hip dysplasia based on radiography with limping and stiffness of hind limbs. He was treated with Rimadyl (75 mg twice daily) for several months but not much improvement was noticed. We provided acupuncture therapy for around 6 months showing great improvement. Since then we provide acupuncture once every 8 to 10 months. July 2007, he came to receive acupuncture treatment with swollen and pain in the right distal radius area and severe limping and pain. Radiography showed stage II osteosarcoma. The chest x-ray showed no remarkable lesions as of diagnosis.

**Treatment:** Surgical therapy was provided (right forequarter amputation).

- Tramadol, metoclopramide, and metronidazole have been administered post operation care.
- Chemotherapy: Adriamycin and Carboplatin initially and Cyclophosphamide (Cytoxan) as lung nodule was found (5 month after surgery)

**Results:** Radiographs showed lung nodule 5 month after amputation of the affected limb. Chemotherapy and herbal therapy have been used and the nodule disappeared in a month confirmed by thoracic radiography. His lung nodule came back 2 months after last chemotherapy. And the nodule has been larger in size and another smaller nodule has been detected one month later.

Pattern differentiation based on Oriental Medicine diagnosis: Osteosarcoma due to Phlegm heat accumulation

- **Tongue profile:** Red with purplish tongue body with thick, whitish, greasy, and wet tongue coating
- **Pulse pattern:** Moderate deep, choppy, rapid

**Treatment of Oriental Medicine Oncology**

- **Dietary therapy:** Fish based diet, mushroom supplement (CAS options, one tablet twice daily), Fish oil (1000mg once daily, Vitamin C 500g twice daily
**Herb therapy and supplement**

Zhi Bai Di Huang Wan, Ding Chuan Wan, Qing Qi Hua Tan Wan, Bu Zhong Yi Qi Tang

**Acupuncture:** PC 6, LI 11, ST 36, BL 11 (Two hours prior to chemotherapy)

**Results:** Karnofsky Performance was improved from 60 to 80. Chest x-ray showed two lung nodules and the size is slowly increased over the time. Otherwise, clinical manifestations are in the normal limit.

**CASE 4**

**Gender/Breed/Age:** Female spayed/golden retriever/9yrs old

**Western diagnosis:** Stage III sublingual squamous cell carcinoma

**Clinical signs/history:** Ptyalism with severe halitosis was observed initially, otherwise clinical signs were in the normal limit. Histopathology showed that mucosa, submucosa, and underlying skeletal muscle of tongue were extensively invaded by a cellular mass. Tumor was comprised of large polyhedral epithelial cells forming solid cords the central areas of which showed keratinization

**Treatment:** Affected area was excised surgically then chemotherapy was performed.

Chemotherapy drugs were adriamycin/cytoxan, adriamycin, and cytoxan.

Supplementary drugs for prevention of the side effects included metoclopromide and sulfasalazine.

Piroxicam; one capsule (5 mg) once daily for one week, then every other day for 8 weeks.

**Pattern differentiation based on Oriental Medicine diagnosis:** Stage III sublingual squamous cell carcinoma caused by Phlegm-heat accumulation in the middle jiao.

Tongue profile: N/A

Pulse pattern: Moderate deep, mild slippery, rapid

**Treatment of Oriental Medicine Oncology**

**Dietary therapy:** Fish based diet, tomato, various kinds of berry, shiitake mushroom

**Herb therapy and supplement**

Herbs: Shan Ci Gu, Shan Dou Gen, Huang Lian, Ban Zhi Lian, Dan Zhu Ye, Bai Hua She She Cao, Qing Huo, Xia Gu Cao, She Gan, Dang shen, Da Zao, and Gan Cao

**Acupuncture:** N/A
Results: Karnofsky Performance was improved from 60 to 80. She is still in remission with no complicated clinical manifestation (around 5 years)

CASE 5
Gender/Breed/Age: Male neutered/ English Springer Spaniel canine retriever/13yrs old
Western diagnosis: Stage II nasal adenocarcinoma
Clinical signs: The main clinical manifestation included epistaxis and vomiting, less appetite and mild lethargy.
Complete blood count (CBC): All criteria is in the normal range
Chemistry: Alkaline phosphatase 332 (8-139), and alanine transferase 107 (22-92)
Treatment: Conventional therapy including chemotherapy and radiation therapy were declined. Piroxicam (6.5mg once daily), glucosamine, flax seed oil have administered.
Oriental Medicine diagnosis: nasal adenocarcinoma due to Lung Yin deficiency with Phlegm-heat accumulation in the Shao Yang meridian
   Tongue profile: Red with mild purplish tongue body color with thick, whitish, greasy, and tongue coating
   Pulse pattern: Moderate deep, choppy, moderate rapid
Treatment in Oriental Medicine Oncology
   Dietary therapy: Fish based diet, vegetable, pumpkin, Job’s tear
   Herb therapy
      CAS Formula – 2 tablets twice daily
      Fish oil - 1 tablet once daily, Vitamin C 500g twice daily
      Patent herbal formulas Wen Dan Tang, Qing Qi Hua Tan Wan, Ding Chuan Wan, Bu Zhong Yi Qi Wan, Bai He Gu Jing Wan, Yunnan Baiyao
   Acupuncture: N/A
Results: Karnofsky Performance was improved from 60 to 80. He is still in remission stage for more than two years but recently he showed clinical manifestation including less appetite, less energy, and arthritis.
### Table 1: Karnofsky Performance Status (KPS) Score

<table>
<thead>
<tr>
<th>KPS score</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Normal performance; no evidence of disease</td>
</tr>
<tr>
<td>90</td>
<td>Able to perform normal activity with only minor symptoms</td>
</tr>
<tr>
<td>80</td>
<td>Normal activity with effort, some symptoms</td>
</tr>
<tr>
<td>70</td>
<td>Able to care for self but unable to do normal activities</td>
</tr>
<tr>
<td>60</td>
<td>Requires occasional assistance, cares for most needs</td>
</tr>
<tr>
<td>50</td>
<td>Requires considerable assistance</td>
</tr>
<tr>
<td>40</td>
<td>Disabled, requires special assistance</td>
</tr>
<tr>
<td>30</td>
<td>Severely disabled</td>
</tr>
<tr>
<td>20</td>
<td>Very sick, requires active supportive treatment</td>
</tr>
<tr>
<td>10</td>
<td>Moribund</td>
</tr>
</tbody>
</table>
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Increasing your Acupuncture Results
Bruce Ferguson, DVM, MS
Adjunct Senior Lecturer, School of Veterinary Medicine
Murdoch University, Perth, Western Australia, Australia

INTRODUCTION:

“It is by virtue of the twelve channels that human life exists, that human beings can be treated and illness cured. The twelve channels are where beginners start and masters end. To beginners it seems easy; the masters know how difficult it is. ~ Huang Di Nei Jing, Ling Shu, Chapter 17.

“There exist no miraculous methods in the world, only plain ones and the perfection of the plain is miraculous” ~ Fei Boxiong (1800-1870)

Is Acupuncture Complex?

“In order to be consistently effective, acupuncture requires a proper diagnosis. If this is correct, a proper selection of points is required. If these are correct, each must be properly located. If these are correct, the technique of insertion must be comfortable for the patient at each point. At each point the proper depth and angle of the needle must be attained. If they are, the correct manipulation of the Qi at each point must achieve the intended response. If it does, the needles must be retained for exactly the correct length of time. If they are, then the treatments must be repeated at just the right interval. If all of these goals are achieved, the acupuncture will be effective for that patient. To achieve these goals for each and every patient requires a level of consistent skill and application that truly deserves the name “art”. ~ Steven Clayvey, Fluid Physiology and Pathology in Traditional Chinese Medicine

Let me share a bit of my background. I have treated many patients, human and non-human, over the last 12 years. Many have benefitted from my treatment. Some have received no
benefit or worsened. I want to share my exploration of methods which have helped me to become a more proficient and effective acupuncturist.

Introduction to Improving Results: Make a Good Diagnosis (which may or may not include a Western differential diagnosis). Do a good TCVM Pattern Differentiation. Choose the Treatment Principle then Choose a Treatment Plan. Choose Acupuncture and Moxibustion Points. Needle and moxa correctly with Intention for consistently positive results.

What is a TCVM Pattern Differentiation? Basically it is Eight Principle, Zang Fu, Five Phase or Channel Diagnosis, or it may be a combination of Patterns. For example, Deficient stifles may be from Kidney Zang Fu, Stomach Channel and Liver Blood Deficiency. The Treatment Principle is a TCVM Statement based upon the TCVM Diagnosis. For example, an aggressive dog with irritability, pink to red tongue with red sides and a tight to wiry rapid pulse has a TCVM Pattern of Liver Qi Stagnation. The Treatment Principle is to Soothe the Liver and Rectify the Liver Qi.

How do we refine the Treatment Principle? TCVM is Heteropathic, we generally treat a Disharmony with the Opposite of the Disharmony. Deficient Conditions are generally Tonified, Excess Conditions are generally Sedated, Cold Disorders are generally treated with Heat, Hot Disorders are generally treated with Cold.

How do we choose a Treatment Plan? The Treatment Plan is a TCVM Statement based upon the Treatment Principle. If the Treatment Principle is to Soothe the Liver and Rectify the Liver Qi, the Treatment Plan is to find points on either the Liver Channel or places on other channels that connect with the Liver (e.g. Gan Shu, BL 18 is the back Shu-association point of LIV). On the Liver Channel choose point(s) which are known to rectify Qi, e.g. Tai Chong, LIV 3. Choose points which Rectify Qi in general, e.g. He Gu, LI 4.

Please remember that there is no shame in an unknown diagnosis. I share an office with a competent, intelligent and skilled board-certified internal medicine veterinarian at Murdoch University’s Veterinary School. Her common comments include “Our current working hypothesis is …”, “We will try xxx drug and see if it helps”, “If xxx drug does not work, we will try yyy drug”, “If yyy drug does not work, we will need to do more diagnostic tests and re-evaluate”.

Sometimes you must modify your Treatment Plan. If there is no positive change or consistent worsening, question your diagnosis. Modify your treatment plan and protocol, e.g.
Moxibustion may be more appropriate for some forms of Stagnation than electroacupuncture. Herbs may be necessary for Chronic Renal Failure. TCVM Food Therapy is commonly necessary in order to resolve disharmonies and maintain health.

Choose Acupuncture and Moxibustion Points from Local Points, Channel Points, Distal and Proximal, and Special Action Points. These may include: Back Shu, Mu, Five Shu, Master, Influential, Xi-cleft, and Extraordinary Vessels. Command Points are those between the elbow or stifle and the distal digits. These points generally have the strongest actions. They include the Special Action Points: Five Shu (Jing-well, Ying-spring, Shu-stream, Ying-river, He-sea), Master Points (LI 4, PC 6, LU 7, SP 6, ST 36, BL 40, SI 9, BL 54), and the Eight Influential-Hui Points (LIV 13, CV 12, CV 17, BL 17, GB 34, GB 39, BL 11, LU 9).

Source-Yuan Points: Points on each of the 12 regular channels where the Source-Yuan Qi resides. Same as Shu-stream point on Yin Channels. Effective for treating diseases of the Zang Fu Organs themselves or Clearing Channels. Located one point proximal to Shu-stream point on Yang Channels. Used to Clear/open Channels.

General Principles: Most distal points (e.g. Ying-Spring, Shu-Stream) tend to treat the opposite end of the channel. He-sea points tend to treat the actual internal Zang Fu organs themselves.

Jiaohui-Confluence Points: Located on the Four Limbs and Linked to Eight Extraordinary Vessels. Used to Treat Diseases of Extraordinary Vessels (e.g. SP 4 treats disharmonies of the Chong Mai).

Command or Master Points: Generally located near the Carpus or Stifle (SP lower leg) in humans; add SI 9 and BL 54 in quadrupeds. These are used to Treat Certain Areas of Body under their “Command”. For example, PC 6 is used to Treat Disorders of the Chest, ST 36 used to treat gastrointestinal disharmonies. They are commonly coupled with Points of Greater Specificity for needs of Each Individual Patient.

Distal Points and Command Points are Powerful! I commonly will use “one needle” hypothesis testing using command points. For example, a dog with cervical pain and resistance to lateral neck flexion presents and I needle SI 3, Hou Xi is the SI Shu-stream point and Confluent point of the GV. Strong needling may give immediate significant reduction in soft tissue pain. There is commonly poor reduction in cervical disk-genesis pain.
Special Note on “Balance” Technique: Dr. Richard Tan <www.drtanshow.com> emphasizes using acupuncture as both a “mirror” and “image” technique. The limbs all “mirror” one another. Toes mirror each other. Tarsi mirror the carpi. Stifles mirror the elbows. Hips mirror the shoulders. For example, the front lateral 5th toe (SI Tai Yang channel) is treated by rear lateral 5th toe (BL Tai Yang channel). Tarsi mirror the carpi: Rear foot medial ankle injury (SP Tai Yin channel) may be treated by medial carpus (LU Tai Yin channel). Stifles mirror the elbows: Antero-lateral stifle injury (ST channel) may be treated by antero-lateral elbow (LI channel). Hips mirror the shoulders: Lateral shoulder injury (TH channel) may be treated by lateral hip (GB channel).

“Image” technique for chest and abdomen: The carpus and tarsus “images” the neck. The elbow and stifle “images” the central abdomen. The shoulder and hip “images” the lower abdomen and genitals. The carpus and tarsus “images” the neck: Thus PC 6 treats the chest. The elbow and stifle “images” the central abdomen: Thus ST 36 treats the bowels.

Increase Your Use of Governing Vessel! After reading Golden Needle Wang Le-Ting: A 20th Century Master’s Approach to Acupuncture, by Yu Hui-chan and Han Fu-ru (ISBN 0-936185-78-3), I have changed my use of the Du channel. Why choose the Governing Vessel? “Treat wilting solely by choosing the Yang Ming”, Su Wen: Wei Lun. The Yang Ming channels are Abundant in Qi and Blood. Thus the focus had been points such as LI 4, 10, 11, 15, ST 41, 36. “First select the governing vessel”, Wang Le-Ting.

Clinical Applications of GV include: Paralysis and wilting, Traumatic spinal cord injury, Wei syndrome, Hemiplegia, Central and peripheral infarcts, and Wind-Cold-Damp Bi.

The Du channel is helpful to treat, especially chronic issues with underlying deficiency. Which GV Points can we use? Bai Hui, GV 20, supplement the true Yang. Feng Fu, GV 16, immediately caudal to occipital protuberance, Arouse the brain and open the portals. Da Zhui, GV 14, cranial to T1, Functions to diffuse and free the flow of all kinds of Yang. Tao Dao, GV 13, Caudal to T1, Supplements Yang and strengthens the spine. Shen Zhu, GV 12, Caudal to T3, Strengthens the lower back, relieves pain, quiets the Shen. Shen Dao, GV 11, Caudal to T5, Fortifies the brain and frees the flow of the vessels. Zhi Yang, GV 9, Caudal to T7, Frees the flow of Qi and promotes Yang. Jin Suo, GV 8, Caudal to T10, Strengthens the low back and softens the sinews. Ji Zhong, GV 6, Caudal to T12, Strengthens and fortifies the lumbar spine;
calms the Shen. Xuan Shu, GV 5, Caudal to L 1, Strengthens the lumbar spine and fortifies the SP and ST. Ming Men, GV 4, Supplements Yang and boosts the Kidneys. Yao Yang Guan, GV 3, Benefits turning the low back, strengthens and fortifies the lumbar spine, supplements Yang and boosts the Kidneys. Hou Hai, GV 1, Foundation and Root of the Governing Vessel. Clinical Application: Insert needles into depressions at approximately every other vertebra from GV 14 to Bai Hui. This technique is effective and well-tolerated by the patients.

**Needle and Moxa Correctly and With Intention.** General Rules of Acupuncture: Needle with Channel to Tonify, Needle against Channel to Sedate, Needle towards Affected Area, “Even” Method. Needle Retention: Shorter to tonify, longer to sedate.

Always choose both the Correct Needle Size and Needle Length. Short needles are used for small, thin patients and shallow acupuncture points commonly found over boney prominences or deeper structures at risk of accidental puncture. Long needles are used for large, thick patients and deep acupuncture points commonly found in large muscle masses.

Needle Diameter: Thin needles are less stimulating and are used for weak, geriatric, small patients and Deficiency conditions: also used for periocular regions. Thick needles are more stimulating and are used in strong and large patients or Excess conditions and Stagnation.

The depth of insertion is determined by local anatomy, age, size, and robustness of the patient, and the intention of the treatment. An older animal that needs tonification would be needled relatively superficially while a younger animal with stagnation in its muscles would be needled more deeply. The Nan Jing Classic of Difficulties suggests that the Qi is more Yang and superficial in spring and summer and thus the needles should have shallow insertion. The opposite is true in autumn and winter in which deeper needle insertion necessary. In general the deficiency and heat patterns should be needled superficially, and the excess and cold patterns should be needled deeply.

**Finding Effective Acupuncture Points for the Disharmony:**

“*Yang tends toward excess, Yin tends toward deficiency*” ~ Zhu Dan-Xi.

Yang corresponds to the meridian system or Jing-Luo. Yin corresponds to the Zang Fu organs. Excess or Stagnation of Qi and/or Blood in the channels is the most common cause of pain. Needling tender or Ah shi points of Excess is the dominant technique to reduce pain. You may needle Special Action points as well. Needling tender or Ah shi points: For example, a dog
with chronic thoracolumbar pain may be needled at local Ah shi points: BL 20, 21, 22 if they are tender, Hua Tuo Jia Ji in thoracolumbar area if tender, reactive or “gummy”, points to Support T-L Stagnation/Pain. This is Supported by Special Action points: SI 3 to open the Du Mai (Confluent Point), BL 65 to open the Yang Qiao (Confluent Point; in the author’s opinion BL 65 has more effectiveness than BL 62), Ji Zhong, GV 6, Strengthens and fortifies the lumbar spine; calms the Shen, and Xuan Shu, GV 5 which Strengthens the lumbar spine and fortifies the SP and ST.

Yin corresponds to the Zang Fu organs. Deficiency of the Zang Fu is the most common cause of internal medical disorders. Needling soft, non-tender acupuncture points maybe used to supplement Zang Fu (E.g. Spleen Qi Deficiency may be treated with BL 20, BL 21, CV 12, ST 36, and CV 6).

**Finding Effective Acupuncture Points:** The Chinese characters for acupuncture suggest that both the right and left hand of the acupuncturist should be used. For right-handed acupuncturists the left hand is the guiding hand and the right hand is the insertion hand. Notably, the left or guiding hand of the needle is at least as important as the right or insertion hand. This is because the left hand finds and holds the area of needle insertion. So, the primary antecedent to effective acupuncture is localizing an active acupuncture point before needle insertion. Detection of “activity” through acupuncture point palpation is essential to determine the precise position of points before needling. The anatomic descriptions of acupuncture points guide us to a general area that then needs to be examined for exact point location. Strict adherence to an anatomical acupuncture description of point location is a novice’s error. It seems that only Live Points (energetically active) give both efficacious and long duration results.

**How do we find effective acupuncture points?** For all species consider qixue (“qi caves”) or jingxue (“channel caves”) and depressions as the first guiding principle. These “qi caves” are commonly found in depressions in elbow and stifles, the large depressions in metacarpals and metatarsals, and in muscle masses. In contrast, remember that a smaller number of points will be large, firm or painful in Excess conditions and patterns of Stagnation. These ah shi (“oh yes”) points are commonly needled as part of a larger treatment protocol. Practitioners may use fingers as “Qi detectors” to guide them in point selection. The tips of the thumb and third finger of the searching hand are touched together and the index finger is slowly passed over likely point loca-
A tingle or electrical feeling is felt in the index finger by the practitioner whenever a “live” acupuncture point is found. Another indication of acupuncture point activity is the temperature of the skin surface over an acupuncture point. Both temperatures above (Excess/Stagnation) and below (Deficiency) surrounding tissues may guide the practitioner to an active point. Finally, the arrival or qi or de qi will inform the acupuncturist of correct point location.

*Finding the Qi:* “The essential point of acupuncture is to induce arrival of qi. Treatment will be effective only if there is arrival of qi.” ~ Ling Shu.

De Qi - The de qi effect is a needle sensation that the patient feels. Commonly we infer this feeling when the patient has skin fasciculation, ear movement, lip movement, or the patient looks at the needle or acupuncturist. The Ling Shu book of the Huang Di Nei Jing (Yellow Emperor’s Inner Classic) emphasizes “The important thing about acupuncture is that the effect comes with the arrival of qi. The sign of this is like the wind blowing the clouds away. It becomes clear and bright, like looking into the blue sky”. To many practitioners the arrival of Qi is synonymous with the acupuncture needle having an effect. Not every needle placed into an animal will elicit a de qi response. Some treatments seem to have an overall de qi response greater than other treatments. This may be related to the relative state of Zheng Qi (True Qi) in the patient. Severely debilitated patients may sometimes lack the Qi to respond. Those patients with neurological deficits or neurodegenerative diseases are least likely to show a consistent or strong de qi response.

Different acupuncture points tend to have point consistency but there can be point inconsistencies of the de qi response. Some acupuncture points have very little apparent arrival of Qi compared to others. Typically the command points or five Shu (Transport) points from the elbow to digit, and stifle to digit, demonstrate strong de qi responses. Bladder Shu points tend to have less likelihood of showing a strong arrival of Qi.

How do we apprehend our ability to activate each acupuncture point if we do not see the arrival of Qi or how can we enhance the de qi response? Zhi Qi - This is the arrival of qi felt by the acupuncturist rather than the patient. As noted above, the de qi response is inconsistent between points. The Zhi Qi response allows us to understand when the acupuncture needle has appropriately activated a point. According to Yanagiya Sori, the man who revived traditional acupuncture in Japan: “The coming and going of Qi is described in the classics as (1) a feeling of
heaviness or tension, (2) pulsation, (3) some trembling, (4) a floating feeling, (5) a sinking feel-
ing, (6) heaviness or dampness, (7) sensation of heat, (8) a refreshing coolness, and (9) sponta-
spontaneous movement in the needle.

When the practitioner is able to feel the coming and going of Qi like this in his inserting
or supporting hand, he can be considered to be a full-fledged acupuncturist”’. Regardless of the
way in which the practitioner ascertains the arrival of qi, the main purpose of acupuncture is to
induce and maximize the patient’s needle sensation, irrespective of which needling method
described below is used.

Many factors may influence the strength of the needle sensation including: constitutional
differences in patients, the nature and duration of the disharmony, the available Zheng Qi of the
patient, the environmental temperature, the accuracy of point location, the needling technique,
and the Qi of the practitioner. Needles may be stimulated manually by Scraping, Insert-
tion/withdrawal, Twirling, Flicking, or Electroacupuncture.

Additional techniques to stimulate acupuncture points. The advantages that electroacupuncture
offers over hand-needling are primarily the following: First, electroacupuncture stimulation can
at some level mimic the manual needle stimulation offered by the therapist thus eliminating time
spent manipulating needles by the acupuncturist. Second, the amount of needle stimulation can
be accurately measured by known frequencies, amplitudes and duration of treatment. This
enables the acupuncturist to rigorously assess a treatment session and more exactly replicate
effective treatments in the future. Lastly, electroacupuncture allows the acupuncturist to deliver a
higher and more continuous level of needle stimulation than by hand thus facilitating special
treatments for pain and neurodegenerative disorders.

Aquapuncture is the injection of fluids and soluble products into acupuncture points.
Sterile saline, vitamin B12, homeopathic remedies, the patient’s own blood, and local anesthetics
are most commonly used in western acupuncture practice. Aquapuncture is used to lengthen and
strengthen an acupuncture treatment. It is also used when the patient will not remain calm
enough to keep filiform needles in place. Aquapuncture is performed with solution volumes,
sterile syringes and needles that are appropriate for the acupuncture point and the size of the
patient being treated. For example, a 15 kg dog may have 1.0 ml of vitamin B12 injected into
acupuncture points with a 3 ml syringe and 25-27 gauge needle in large muscle masses. A 400 kg
mare may have 4-6 ml of vitamin B12 diluted with sterile saline injected into acupuncture points with a 10 ml syringe and 20-22 gauge needle in large muscle masses. Injection of an animal’s own blood has become common for autoimmune and inflammatory disorders. The blood is generally drawn from a large vein (e.g. cephalic or jugular) into a syringe without additives. It is compassionate to the patient to change hypodermic needles every 1-2 injections to reduce the pain from needle dulling. Local points are used for most hemoacupuncture such as BL 1 for keratoconjunctivitis sicca.

Moxibustion is a method by which moxa punk or other herbs are burned on or above the skin near acupuncture points. The heat and herbal essence warms the Qi and Blood in the channels and collaterals and thus increases the flow during times of Stasis. Moxibustion also invigorates the Yang Qi and dispels internal Cold and Dampness as well as eliminates some forms of local Heat Toxin. According to Wang Le-Ting, “Acupuncture and moxibustion each have their limits and abilities and therefore should mutually assist and mutually support each other”. Moxibustion Functions include: Warming action and supports Yang, Course and free the flow of the channels and network vessels, Move the Qi and quicken the Blood, Dispel Dampness and expel Cold, Disperse swelling and scatter nodulation, Secure Yang and stem counterflow.

Applying Moxibustion: The acupuncturist’s guide hand is placed on the patient’s skin surface with the index and middle finger spread about 2 cm apart. The insertion or moxatherapy hand holds the moxa stick between the thumb and forefinger. The 5th digit of the moxatherapy hand contacts the resting guide hand as a point of support to set the appropriate distance to the skin. The moxa stick is then moved towards the skin and acupuncture point with gentle wrist motion until the acupuncturist’s guide hand’s index and middle fingers become warm and the moxa is then withdrawn. This is repeated every 1-2 seconds until the cumulative heat is either too much for the acupuncturist’s guide hand or the patient indicates that the sensation has approached an intolerable level. The rationale is to have equal distance to each guide hand finger and the patient’s skin. Moxibustion Techniques include: needle moxibustion (Cut or compressed moxa punk on needle) or Stick-on “mini-moxa” cones with hollow center. Moxa is not to be used over sensitive nervous or vascular tissues.

Needle with Intention: Advanced healing arts professionals understand that exceptional healing occurs if there is a transfer of qi into the patient by the practitioner. Simple ways to facilitate this
transfer include the acupuncturist having an upright and comfortable posture, feeling one’s feet completely adherent to the earth beneath, leaning into rather away from the needling, and breathing deeply while focusing on inserting the needle on one’s outbreath. Some believe that intention is an extension of Qi flow. Every acupuncturist should carry healing intentions and extend these intentions into all of their treatments

REVIEW:
Do you have the correct diagnosis? Is the disharmony one of Excess/Hot/External? Generally treat by Draining/Cooling/Clearing. Is the disharmony one of Deficiency/Cold/Internal? Generally treat by Tonifying/Warming/Supplementing. “Yang tends toward excess, Yin tends toward deficiency” Zhu Dan-Xi.
References


ABSTRACT

The Diagnostic Points are part of the traditional examination and are one of the most important TCM tools. The Diagnostic points are the Association and Alarm points and they are special acupoints where the Zang Fu organ Qi is distributed. Palpable sensitivity of diagnostic points can signal an imbalance in the underlying organ or along the meridian itself. They may be used in combination. Classically, sensitivity at both the association and the alarm points indicates an imbalance in the related visceral organ. In addition to diagnosis, association and alarm points can be used in treatment. The results of this examination may be used to determine the treatment strategy, can help the practitioner evaluate the clinical progress and success of therapy and find any imbalance before the disease process is evident.

1. Introduction. TCMV practitioners can identify a disorder in the body by feeling for sensitive acupoints or Meridians pathways (Xie, 2005).

The Diagnostic Points are part of the traditional examination (Schoen, 2001) and are one of the most important TCM tools (Schwartz, 2008). The Diagnostic points are the Association and Alarm points (Schwartz, 2008).

A practitioner can palpate certain cutaneous points that course along the Bladder meridian, which parallels the spinal column (Schoen, 2001). These bilateral diagnostic points are located at the border of the Longissimus thoracis and Iliocostalis muscles (Schoen, 2001). Known as association points or back Shu points, they connect to each of the 12 major internal organs and meridians (Schoen, 2001).

In addition, there points are points along the lateral and ventral part of the body known as alarm points or front Mu points (Schoen, 2001). These also correspond to the same internal organs (Schoen, 2001).

The Association points and the Alarm points are special acupoints where the Zang Fu organ Qi is distributed (Xie, 2005).
Association points and alarm points are considered diagnostic points (Schoen, 2001). Palpable sensitivity of diagnostic points can signal an imbalance in the underlying organ or along the meridian itself (Schoen, 2001 & Xie, 2005). For example, tenderness at BL 13 may indicate a Lung problem, and sensitivity at CV 12 indicates a Stomach disorder (Xie, 2005).

The Association points and the Alarm points may be used in combination (Xie, 2005). Sensitivity can be manifested as a skin rippling response, growling, grunting, or crying out in pain, turning of the head toward the stimulated point, willingness to bite, and weakness (show as sitting down) (Schoen, 2001 & Schwartz, 2008).

One may wonder how to differentiate local back pain from sensitivity at an Association point related to a Zang Fu organ (Xie, 2005). This can be difficult, but it may be partially resolved by palpating the related Alarm point when sensitivity is noted at an Association point (Xie, 2005). If both the Association and Alarm points are sensitive, one might feel more confident that the related organ is unbalanced (Xie, 2005).

Classically, sensitivity at both the association and the alarm points indicates an imbalance in the related visceral organ (Schoen, 2001). The imbalance is interpreted in traditional Chinese medical term, (i.e., the organ itself may be malfunctioning, or its interaction of checks and balances may be malfunctioning) (Schoen, 2001). For example, many cats with polyuria and polydipsia associated with chronic renal failure exhibit sensitivity at the Kidney association points (Schoen, 2001). However, cats with vomiting as a major sign of renal failure may show excruciating sensitivity at the Spleen-Pancreas point but only mild or no sensitivity at Kidney association point (Schoen, 2001). In TCM Five Element, a control system exists in which classically the Earth element (Spleen-Pancreas) keeps the Water element (Kidney) in check (Schoen, 2001). Therefore, the patient’s history and TCM patterns should be considered when diagnostic points are sensitive (Schoen, 2001). Here again, more than one variable and circular thinking, as compared with linear thinking, are considered as causing the sensitivity (Schoen, 2001). The location of the sensitivity may be related to the chronicity of the problem and individual nature of the patient. To avoid confusion, less-experienced TCM practitioners can simply consider the current sensitivity and the possible imbalance of the organ (Schoen, 2001).

In addition to diagnosis, association and alarm points can be used in treatment (Schoen, 2001). Acupuncture, aquapuncture, acupressure, or massage of these points can be useful in
treatment of the underlying imbalances (Schoen, 2001). Palpation of diagnostic points can be added to a routine physical examination for wider database, and treatment of the sensitive diagnostic points may be indicated during an interim period while more diagnostic information is being gathered (Schoen, 2001).

The results of this examination may be used to determine the treatment strategy (Xie, 2005). Performing the scan for sensitive points before and after each acupuncture treatment can help the practitioner evaluate the clinical progress and success of therapy (Xie, 2005) and find any imbalance before the disease process is evident (Schwartz, 2008).

The regular palpation made in Occidental Medicine for the evaluation of the organs can be difficult. Most of the organs are hard to palpate because they are located between the ribs such as liver and spleen. This can be easier using the Diagnostic points. The kidney is located exactly at the last free rib, as is the Alarm point, GB25.

Association Points. The Association points (Shu points) can be the most important points in acupuncture diagnosis (Schoen, 2001). These points are also named for the organ or meridian that they treat (Schoen, 2001). All Association points are located on the Bladder Meridian along the back about two fingers width on either side of the dorsal midline, lateral to the dorsal spinal process (Schoen, 2001). The Association Points are located in the depressions on either side of each Dorsal Spinous Process (Schwartz, 2008). Lung, Pericardium and Heart are located between the scapulas (Schwartz, 2008). Liver, Gall Bladder, Spleen and Stomach are located along the thoracic vertabrae caudal to the scapulas (Schwartz, 2008). Lateral to the lumbar vertabrae are Triple Heater, Kidney and Large Intestine (Schwartz, 2008). The Small Intestine and Bladder Association points are located in two depressions in the sacral vertebra making the palpation difficult for the acupuncturist (Schwartz, 2008). These point localizations were made based on human maps but both species have different numbers of vertebrae. Plus the innervation of Bladder and Small Intestine have different origins too (Schwartz, 2008). If there is any sensibility in these locations, it can indicate Bladder or Small Intestine problems (Schwartz, 2008).
Table 1 Associations Points

<table>
<thead>
<tr>
<th>ORGAN</th>
<th>ASSOCIATION POINT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung</td>
<td>B 13</td>
</tr>
<tr>
<td>Pericardium</td>
<td>B 14</td>
</tr>
<tr>
<td>Heart</td>
<td>BL 15</td>
</tr>
<tr>
<td>Liver</td>
<td>BL 18</td>
</tr>
<tr>
<td>Gallbladder</td>
<td>BL 19</td>
</tr>
<tr>
<td>Spleen-Pancreas</td>
<td>BL 20</td>
</tr>
<tr>
<td>Stomach</td>
<td>BL 21</td>
</tr>
<tr>
<td>Triple Heater</td>
<td>BL 22</td>
</tr>
<tr>
<td>Kidney</td>
<td>BL 23</td>
</tr>
<tr>
<td>Large Intestine</td>
<td>BL 25</td>
</tr>
<tr>
<td>Small Intestine</td>
<td>BL 27</td>
</tr>
</tbody>
</table>

Alarm points. There are points called alarm points that are located on the ventral abdomen (Schoen, 2001). There is an alarm point for each of the 12 Zang Fu organs, but it may or may not lie on the same meridian for which it serves as alarm point (Schoen, 2001).

Alarm points are used in both diagnoses and treatment (Schoen, 2001). If there is sensitivity at an alarm point, it indicates a problem with that organ or meridian for which it is named (Schoen, 2001).

Table 2 Alarm Points

<table>
<thead>
<tr>
<th>ORGAN</th>
<th>ALARM POINT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung</td>
<td>LU1</td>
</tr>
<tr>
<td>Pericardium</td>
<td>CV 17</td>
</tr>
<tr>
<td>Heart</td>
<td>CV 14</td>
</tr>
<tr>
<td>Liver</td>
<td>LIV 14</td>
</tr>
<tr>
<td>Gallbladder</td>
<td>GB 24</td>
</tr>
<tr>
<td>Spleen-Pancreas</td>
<td>LIV 13</td>
</tr>
<tr>
<td>Stomach</td>
<td>CV 12</td>
</tr>
<tr>
<td>Triple Heater</td>
<td>CV 5</td>
</tr>
<tr>
<td>Kidney</td>
<td>GB 25</td>
</tr>
<tr>
<td>Large Intestine</td>
<td>ST 25</td>
</tr>
<tr>
<td>Small Intestine</td>
<td>CV 4</td>
</tr>
</tbody>
</table>
Empirical points. During our practice we found out that there are two empirical points that can indicate hip problems and shoulder, elbow and neck problems also. They are TH 14 and GB 30.

Table 3 Empirical Points

<table>
<thead>
<tr>
<th>Empirical point</th>
<th>Diagnoses</th>
</tr>
</thead>
<tbody>
<tr>
<td>TH 14</td>
<td>Shoulder, elbow and neck problem</td>
</tr>
<tr>
<td>GB 30</td>
<td>Hip problem</td>
</tr>
</tbody>
</table>

Relationship between paravertebral sympathetic chain and acupuncture Association points. The sympathetic and the parasympathetic nervous system are parts of the autonomic nervous system. The definition for autonomic is: “Cannot be controlled by the mind”. You can say that these systems work in balance with each other and directly or indirectly affect almost every structure in the body (e.g. heart rate, cardiac output, lumbar function, kidneys, blood vessels, stomach and intestines).

The sympathetic nervous system has an active "pushing" function. The parasympathetic has mainly a relaxing function.

The sympathetic nervous system is located to the sympathetic chain, which connects to skin, blood vessels and organs in the body cavity.

The autonomic nervous system is most important in two situations: emergency situations that cause stress and require us to "fight" or take "flight", and nonemergency situations that allow us to "rest" and "digest". The autonomic nervous system also acts in "normal" situations to maintain normal internal functions and works with the somatic nervous system.

Sympathetic nerves originate inside the vertebral column, toward the middle of the spinal cord in the intermediolateral cell column (or lateral horn), beginning at the first thoracic segment of the spinal cord and are thought to extend to the second or third lumbar segments. Because its cells begin in the thoracic and lumbar regions of the spinal cord, it is said to have a thoracolumbar outflow. Axons of these nerves leave the spinal cord in the ventral branches of the spinal nerves, and then separate out as white rami which connect to chain ganglia extending alongside the

How to evaluate the diagnostic points Pain with light pressure indicates an acute condition, and pain with deep pressure indicates a chronic condition of that meridian or corresponding organ (Schoen, 2001).
To assess association (Shu) points, stand behind the animal, facing in the same direction, and use your index fingers to palpate the points using light to moderate pressure (Schoen, 2001). Sensitivity may indicate a problem in that area of the meridian as a local back problem (Schwartz, 2008) or in the underlying internal organ (Schoen, 2001).

To further explore the response, palpate the alarm (Mu) points (Schoen, 2001). Usually only light pressure is required to elicit a response (Schoen, 2001).

Location of the Diagnostic points

Association points:

BL 13: 1.5 cun lateral to the caudal border of the spinous process of the 3rd thoracic vertebra.

BL 14: 1.5 cun lateral to the caudal border of the spinous process of the 4th thoracic vertebra.

BL 15: 1.5 cun lateral to the caudal border of the spinous process of the 5th thoracic vertebra.

BL 18: 1.5 cun lateral to the caudal border of the spinous process of the 10th thoracic vertebra.

BL 19: 1.5 cun lateral to the caudal border of the spinous process of the 11th thoracic vertebra.

BL 20: 1.5 cun lateral to the caudal border of the spinous process of the 12th thoracic vertebra.

BL 21: 1.5 cun lateral to the caudal border of the spinous process of the 13th thoracic vertebra.

BL 22: 1.5 cun lateral to the caudal border of the spinous process of the 1st lumbar vertebra.

BL 23: 1.5 cun lateral to the caudal border of the spinous process of the 2nd lumbar vertebra.

BL 25: 1.5 cun lateral to the caudal border of the spinous process of the 5th lumbar vertebra.

BL 28: lateral to the 2nd sacral foramen, in the depression between the medial border of the dorsal iliac spine and the sacrum.
Alarm points:

- **LU 1**: in the first intercostal space, medial to the greater tubercle of the humerus, in the m. pectoralis superficial.
- **CV 17**: on the ventral midline, at the level of the fourth intercostal space.
- **CV 14**: halfway between CV 12 and the xiphoid process, on the midline.
- **LIV 14**: in a depression in the 6th intercostal caudal to the costochondral junction of the 6th rib.
GB 24: in a depression in the 7th intercostal space, caudal to the costochondral junction of the 7th rib.
LIV 13: on the lateral side of the abdomen, below the free end of the 12th rib.
CV 12: halfway between the umbilicus and the xiphoid process, on the midline.
CV 5: 2 cun caudal to the umbilicus, on the midline.
GB 25: on the lateral side of the abdomen, on the lower border of the free end of the 13th rib.
ST 25: 2 cun lateral to the center of the umbilicus.
VC 4: 3 cun caudal to the umbilicus, on the midline.
VC 3: 4 cun caudal to the umbilicus, on the midline.

Empirical points. TH 14: caudal and distal to the acromion, on the caudal margin of the acromial head of the m. deltoideus.
Hip Dysplasia Diagnostic Point: it is an association of a trigger points located between the sartotius muscle and tensor fasciae latae muscle plus pressuring over the major trocanter.

![Figure 7 TH 14](image)

![Figure 8 Hip Dysplasia Diagnostic Point](image)

**Evaluation.** During our practice a hude number of animals (dogs and cats) were evaluated by palpating their Diagnostic points. Most of them came with no specific symptoms. If they showed sensitivity other exams were required such as: X-Ray, blood test and urine samples. One of the most impressive points was the Hip Dysplasia Diagnostic Point. 100% of the animals which were sensitive at this point had alterations their hips.

The sensitivity of the Diagnostic points showed:

- BL 13: asthma, cough, lung edema.
- BL 14: heart failure.
- BL 18: ↑ ALT (alanine aminotransferase), ↑ SAP (serum alkaline phosphatase), liver tumor.
- BL 19: gall bladder stones
- BL 20: spleen tumor, vomit.
- BL 22: renal failure.
- BL 23: asthma, renal failure, kidney stones.
- BL 25: constipation, diarrhea, leiomioma.
- BL 28: urinary infection, urinary incontinence, urinary retention, bladder stones.
- LU 1: asthma, cough, lung edema, heart failure.
- CV 3: urinary infection, urinary incontinence, urinary retention, bladder stones.
- CV 14: heart failure.
CV 12: vomit, gastritis.
CV 17: heart failure.
LIV 13: ↑ ALT, ↑ SAP, spleen tumor.
LIV 14: ↑ ALT, ↑ SAP, liver tumor, seizure.
ST 25: constipation, diarrhea.
GB 25: renal failure, kidney stones.
Hip Dysplasia Diagnostic Point: hip dysplasia, hip arthroses.
TH 14: neck pain, shoulder and elbow problem.

Results. The results showed that Diagnostic points present sensitivity when the organs or joints have any kind of alteration and with this information we can better choose what kind of further diagnostic exams we can ask perform (radiographs, blood or urine samples).

Discussion. From 1986 to 1991 Dr Cheryl Schwartz conducted a retrospective study of 175 patient records, comparing the sensitivity of diagnostic points, especially the Association points, to changes in blood values\(^1\). The results were:

BL 18: 91% of the patients showed sensitivity at BL 18 and concurrent rises in SAP, AST, ALT, cholesterol or bilirubin values.

BL 20: 95% showed sensitivity at BL 20 and concurrent rises in serum amylase, lipase or glucose values.

BL 15: 75% showed sensitivity at BL 15 and concurrent rises in serum CPK activity. Also, radiographs or ultrasound examination revealed cardiomyopathy in 50%.

BL 23: 96% showed sensitivity at BL 23 and concurrent rises in BUN (blood urea nitrogen) and/or creatinine values. In addition, 63% of the patients showed sensitivity at BL 20 because they also presented with vomiting as a clinical complaint.

Comparing both results, it shows that, the Diagnostic points seem to indicate an imbalance.

Conclusion. The Diagnostic points can be used in the clinic and acupuncture practice by occidental veterinarians and TCM practitioners. They are important tools that can help evaluating the treatment strategy, clinical progress and success of therapy and find any imbalance before a disease process is evident. The Diagnostic points are easy to incorporate into clinical practice, quick to do and can guide which exam we can ask for.
References


SUMMARY

Objective: To describe the direct adverse effects of acupuncture treatment encountered in a typical caseload of domestic animals.

Design: Retrospective review of hospital records.

Animals: 221 cats, cattle, dogs, and horses.

Procedures: 1,292 acupuncture treatments for a variety of clinical conditions were performed in 221 animals.

Results: The rate of adverse reactions is 0.3%; half of these consist of mild local skin swelling which is self-limiting and resolved without treatment. There was one abscess and one seizure event seen; neither required hospitalization or was life-threatening.

Conclusions: Adverse reactions to acupuncture treatment of animals are a rare event and a low risk to the patient.

Clinical Relevance: Clinicians should advise animal owners contemplating acupuncture therapy that while it is unlikely to result in harm, there are several known risks. The risks of acupuncture treatment can be compared to other forms of therapy, and compares favorably for several common indications.

INTRODUCTION

Acupuncture for animals is a therapy of increasing importance, with a broad range of indications in veterinary medicine. The use of acupuncture for animals appears to be increasing, and is now entering the realm of the veterinary curriculum in AVMA-accredited veterinary Colleges. The American Association of Equine Practitioners recently reported from survey data that 17% of its members perform acupuncture or refer cases to another practitioner for acupuncture. Although there are large-scale studies describing complications of acupuncture in human medicine, we were unable to find any descriptions of the adverse effects of acupuncture treatment in animals. As a result, questions about the safety of this form of treatment remain unanswered. Adverse reactions to acupuncture in human practice, though rare, have been described and include vertigo, fainting, nausea, petechia, and hematoma. In this paper we detail
our experiences with adverse reactions in animals treated with acupuncture in a teaching hospital referral and community practice service.

**Materials and Methods**

The records from 221 cases treated with acupuncture from 1996 to 2007 (12 years) at the Atlantic Veterinary Teaching Hospital were reviewed. The species, breed, age, gender, diagnosis, number of treatments, average number of needles used for each treatment, and details of adverse reactions were extracted from those records. Treatments of acupuncture points by means other than conventional acupuncture needles were few (less than 5% of treatments), and included laser, injection, implants, or moxibustion. These less frequent forms of treatment were reviewed for adverse reactions, none were found, and were not included in the numerical summaries in this report since they did not involve the use of acupuncture needles.

In our practice, as is usually the case for animal acupuncture, clipping hair, alcohol swabbing, and other forms of skin preparation at the site of needle insertion are not done. The needles used were sterile, single-use, stainless steel acupuncture needles from 4 different manufacturers, and which varied in length from 7 to 100 mm and in diameter from 0.16 to 0.35 mm. In all cases stimulation of the acupuncture point is applied in the form of manual needle manipulation, including short turning motions (twirling), and small in-and-out movements (thrusting). Approximately 25% of needles were also connected by wires to an electrostimulator device, which provides a square-wave alternating current at low voltage. The average duration of needle placement in the patient is 15 minutes, with a range of 3 to 45.

Post-treatment somnolence and a transient local resistance to needle extraction are known and frequent events in acupuncture therapy, and as such were not recorded nor will be further described here. We define adverse effects of acupuncture to include any unintended local or systemic patient reactions due to needle placement. In our practice the animal owner is routinely asked about unusual events and patient responses at follow-up visits throughout a course of treatment, and both these and observed adverse reactions were recorded for each case.

**Results**

Animals seen for treatment in the Atlantic Veterinary College acupuncture service are, with few exceptions, resident in the province of Prince Edward Island. Summaries of species, treatment, and diagnoses are described (Table 1). The most frequent type of case seen for treat-
ment was an aged dog with a diagnosis of chronic orthopedic pain. The most frequent diagnoses encompassed chronic orthopedic pain, back pain, inflammatory bowel disease, and recurrent airway obstruction. A total of four cases were found to have had direct adverse effects from treatment; all were due to local effects of needle placement.

Table 1 Descriptive Statistics of Acupuncture Cases and Treatment

<table>
<thead>
<tr>
<th>Species</th>
<th>Number of cases</th>
<th>Gender M / F</th>
<th>Mean number of treatments</th>
<th>Mean number of needles</th>
<th>Most frequent diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bovine</td>
<td>3</td>
<td>0 / 3</td>
<td>2</td>
<td>4.7</td>
<td>Post-parturient paresis</td>
</tr>
<tr>
<td>Canine</td>
<td>128</td>
<td>60 / 63</td>
<td>6.4</td>
<td>10.5</td>
<td>Hip dysplasia</td>
</tr>
<tr>
<td>Equine</td>
<td>74</td>
<td>38 / 36</td>
<td>5.1</td>
<td>7.6</td>
<td>Primary back pain</td>
</tr>
<tr>
<td>Feline</td>
<td>16</td>
<td>6 / 10</td>
<td>4.3</td>
<td>8.3</td>
<td>Polyarthritis</td>
</tr>
<tr>
<td>Totals</td>
<td>221</td>
<td>104 / 117</td>
<td>1,292*</td>
<td>12,274*</td>
<td>-</td>
</tr>
</tbody>
</table>

* - totals given do not equal the sum due to rounding errors

**Case 1**

A 10-year old Hanoverian gelding being treated for back pain and palmar heel pain of the left forelimb showed a mild local swelling on the axial surfaces of the heel bulbs on the treated foot for one week following the first treatment. The swelling was limited to the thickness of the skin, there were no other local or systemic signs of infection, and treatment was not instituted. Swelling resolved in less than one week, and did not reoccur. The use of acupuncture needles in the affected points of this region resumed as soon as the swelling resolved, and swelling did not recur.

**Case 2**

A 9-year-old domestic short-hair cat was being treated for feline asthma. Following the third treatment a 1 cm diameter swelling on the top of the head was seen. The swelling involved only the skin, was circular, and surrounded the location of the point called GV-20. There were no other signs of infection or more serious complication. The swelling resolved without treatment within 1 week of its occurrence.
CASE 3

A 17-year-old spayed female cat was being treated for feline asthma, and developed an abscess medial to the left lesser humeral tubercle, close to the location of the LU-1 acupuncture point which had been treated 10 days previously. Purulent drainage from a small skin opening was present, and the infection resolved following 7 days of systemic antimicrobial therapy.

CASE 4

A 7-year-old spayed female Beagle entered a seizure state during its second acupuncture treatment for separation anxiety. The owner and previous owner had never seen seizure events in this dog before, and there had been no adverse effects from an identical acupuncture treatment one week previous. At the time of seizure onset, acupuncture needles had been placed in 7 points, and a 1.1 mm surface contact pellet had just been applied to the Shen-Men point on the medial pinna of the right ear. The dog slowly rolled to the right with a rigid body and fixed facial expression: It seemed unaware of its surroundings and was unresponsive to voice and touch. Over the next three minutes and following removal of all acupuncture needles, the dog was able to slowly resume and maintain sternal recumbency and became responsive to sound and touch. A few minutes later, the dog appeared fully recovered and began to run about with a normal habitus, and showing a new, non-weight-bearing left hind lameness. There were no subjective signs of pain, and the dog seemed unaware or at least unconcerned that it was not using the leg at all. Weight bearing on the limb gradually resumed over the next five minutes, and 15 minutes after onset of the seizure there were no remaining signs of it. Follow-up to 7 months revealed no further seizure events seen by the owner.

DISCUSSION

Adverse reactions to acupuncture needles totaled 4 in 12,274 needles, or approximately 1 per 3,000 needles. However, two of these reactions consisted of transient superficial edema of the skin, and as neither pain nor other more serious signs were present, may be considered to be clinically trivial. The rarity of significant adverse reactions makes meaningful quantification difficult. For example, the infection rate following acupuncture may be calculated as 8.1/100,000 needles, however, this rate is based on a single event, and the true number may be much smaller or larger (Table 2).
In one study on adverse effects of acupuncture in humans, no abscesses and only a single case of cellulitis were reported in 31,822 treatments (the number of needles per treatment was not noted).\(^2\) It is interesting to note that a similar disparity exists between humans and domestic animals in reports of surgical wound infections.\(^3\)

Our case which entered a seizure state during treatment was of particular interest, since this dog had never been seen to have a seizure event prior to treatment, nor has it done so since (follow-up = 7 months). In three large-scale studies on human patients, seizure activity was seen only once in a total of 31,822 treatments.\(^2\) It is possible that this dog showed signs of idiopathic heritable Beagle epilepsy.\(^4\) It is also worth noting that idiopathic epilepsy in dogs is a condition which many practitioners feel can be treatment effectively with acupuncture.\(^5,6\)

Overall, there is an impression that the rates of adverse effects of acupuncture in animals is very low, and either comparable to or lower than adverse reactions to many commonly-used medications and surgical procedures (Table 2).

While we were interested in the direct adverse effects of acupuncture, there may be unknown indirect adverse effects. Indirect effects may include harmful or attenuating interactions with other concurrent therapy, delay of implementing another therapy in the event acupuncture treatment fails to resolve the patient’s problem, and the financial costs of treatment. Note that it is extremely difficult to measure the indirect adverse effects of any therapy, as these are often specific to the patient or animal owner circumstances. Very large numbers of cases and sophisti-
cated statistical methods are required to learn more about the indirect harm that may be seen with acupuncture or by any other type of treatment.

The practicing veterinarian strives for the safest and most effective therapies for his or her patients. Proof of treatment efficacy may not be known for many therapies, and clinical impressions often remain the only basis for selecting from a range of choices. In the case of treatments which lack suitable research models, certain knowledge of local and systemic effects, and for which commercial interests cannot be identified, we will be waiting many years for this information to be developed. We can serve the needs of our profession and those animals which will come to us for treatment in the future if we can increase our knowledge of the risks of treatment, be it with acupuncture or any other therapy. The data presented here informs us that the complications of acupuncture are rare and transient. While it is a low-risk treatment, further efforts to provide details of its risks will permit comparisons to other forms of treatment and be of value to the profession.
References


Laser Acupuncture in Infectious Diseases and Wound Infections Including MRSA Infections
Uwe Petermann, DVM
Veterinary Acupuncture Clinic Melle
49326 Melle, Germany

SUMMARY
Pulse Controlled Laser Acupuncture (PCLAC) is the combination of two very effective treatments each for its own, acupuncture and Low Level Laser Therapy (LLLT). Laser Acupuncture will be described as an alternative treatment of all kinds of diseases arising from infectious germs. These are infectious diseases of organs like tonsillitis, acute bronchitis, pneumonia, kidneys, bladder and intestinal infections. Also any tissue infection deriving from injuries or post-operation including phlegmons (cellulitis infections), as well as joint and tendon sheath infections can be positively influenced or healed by laser acupuncture treatment. If there is enough experience in laser acupuncture with patients like these, all these diseases can be treated without antibiotics. This is from a very special interest in cases of MRSA infections, when antibiotic treatment has no effects.

INTRODUCTION
Acupuncture. Acupuncture can be carried out in many different ways to reach the aim of stimulating the immune system and strengthen the infected organ, tissue or joint. Just to mention some of these many points that come into consideration, LI 4, SP 6, ST 36, GV 14, LU 11, etc. The election of these points is dependent upon many specific factors of the inflammation. But there are two specific most important acupuncture points that we can use in general, that means in any kind of infection not depending on specific factors, and which I treat in any case of infection. These are two Luo points combined by TCM Midday- Midnight-rule, TH 5 and SP 4. The Midday- Midnight rule is one of my favourite acupuncture rules because it balances in every case a Yin and a Yang meridian, one on the hand, one on the foot and it balances the circadian energy because both have an interim of 12h in their circadian rhythm. These two Luo points are TH 5, which is the Thymus point of Ear Acupuncture* and SP 4, which is the Interferon point of Ear Acupuncture*. I call them “Switch on points for the immune system”. In case of organ infections one combines them with the specific organ point; e.g. the organ point of the lung at the ear or the identical body point LU 7, the tonsil point (or LU 11), the kidney point (or
KID 7), the uterus point (or SP 5) etc. In infected wounds, joints, abscesses, phlegmons, etc., one combines the two “Switch on points” with the concerning Tendino-Muscular Meridian (TMM). The TMMs are opened by their Ting point, their Tonification point and a specific Reunion point, which depends on if we treat a Yin or Yang meridian and if it is situated on the fore- or hindlimb. We have four Reunion points for the TMMs: GB 13 for the Yang meridians of the forelimb, GB 22 for the Yin meridians of the forelimb, SI 18 for the Yang meridians of the hindlimb and CV 3 for the Yin meridians of the hindlimb. So one can see, it is a very simple but nevertheless extremely effective concept.

**LLLT (Low Level Laser Therapy).** LLLT (low level laser therapy) of the infected tissue is added as a very effective anti-inflammatory therapy. For this LLLT I use a 90 watt impulse lasers with 904 nm wavelength, because only these lasers can penetrate deep into tissue that enough laser energy reaches the infected cells. The main principle of the anti-infectious force of LLLT is the clearance of peroxide radicals in the infected tissue (KARU, T); another one is activation of different kinds of immune cells like lymphocytes and macrophages and mediators like lysosomal enzymes. Laser light also leads to demarcation of infected and traumatized tissue. That means laser light separates the infected cells which are on the border to cell death and stimulates their phagocytosis. The cells that have a chance to survive are strengthened by laser energy.

There are two specific impulse frequencies that are in resonance with infected tissue and of much better value than any other frequency. It is Fr. A’ and A” according to Nogier (A’ = 292 Hz and A” = 37376 Hz). Because in impulse lasers every beat is one energy impulse the frequency A” has more than 150 times more energy /sec than A’. In the moment there is only one laser worldwide that is able to provide us with this high energy frequency (Physiolaser, 90 watt impulse laser, Reimers & Janssen, Berlin). The kind of treatment and the results are explained on several case studies.

1. **Infectious arthritis and tendonitis.** Infectious arthritis and tendonitis is positively affected by LLLT that offers a good chance of healing. In these cases it is essential to find the focus of the infection and include it to the treatment plan. Especially with infections after minimal invasive surgery we find the invasive channels as the focus and have to treat them very carefully by LLLT. We also treat the whole infected joint or tendon sheet with LLLT (frequency A’/A”) with the laser for about 2 minutes (fr. A”) or about 20 minutes (fr. A’) and with special attention we
have to treat the surgery channels where we found a focus of infection. Again we treat the TMM (with Fr. A’ 30sec or A’’ 5sec or by dry needles) and TH 5, SP 4 (Fr. 5, 20sec, or dry needles) against inflammation. For acupuncture we treat.

2. Wound infection. Laser treatment is highly recommended for infected wounds, fistulas, disturbed wound demarcation and deep wounds. Again we treat the TMM and the immune stimulating points. For local wound treatment we add LLLT with Fr. A’/A’’. Especially in horses we see the development of hyper-granulation tissue in wounds at the lower part of the limbs. Besides the foregoing described above, treatment with “Wound Water” is also recommended. The “Wound Water” contents copper vitriol, healing earth and homeopathic dilution of Arnica, Echinacea and Hamamelis (recipe can be ordered). A very special indication for Laser Acupuncture is treatment of MRSA and Pseudomonas infections where antibiotic treatment has no effects. The treatment follows the same principles as described above (see case studies).

CASE REPORT 1

Figure 1 shows a neglected wound with a swelling nearly as big as a handball over the fetlock of a foal. The foal had been outside in the pasture night and day. After the wound in the foal was discovered by the owner it received standard treatment including bandages and antibiotics for about 2 weeks before it came in that state for laser acupuncture. The following therapy included daily LLLT with 6 x 90Watt impulse laser shower for 15 minutes. Additionally laser acupuncture (LA) of SP 2 (wound healing), TH 5, SP 4 (immune stimulation) was carried out. No other treatment such as antibiotics, etc. had been applied. Figure 2 shows the situation 3 weeks after beginning Laser Acupuncture: the wound is contracted and shows good epithelialization and sound granulation tissue. The swelling is reduced by half. In Figure 3 the healing was finished after 4 months of treatment. Over that time the foal was treated nearly every day, most of the time by its owner. I saw the foal every 2 weeks.
Figure 1 healing process of a neglected wound in a foal

Figure 2

Figure 3
CASE REPORT 2

The case of an MRSA infection in a dog shows the excellent anti-infective effect of Laser Acupuncture even in such cases, in which antibiotics have no effect. You can go as far as to say that Laser Acupuncture is currently the only successful treatment possibility.

A three-year-old German shepherd mix was presented for Laser Acupuncture. The dog had been treated twice weekly at a small animal hospital for four months. During this time the treatment was completely unsuccessful and treatment had been stopped. Euthanasia of the dog was recommended to the owner, because there was finally no way to help. But the owner asked me whether Laser Acupuncture would be able to cure MRSA infection. I answered truthfully that I didn’t treat MRSA infections before, but many other antibiotics resistant infections have successfully been treated.

The infection had started 4 month previously when the dog was presented to the veterinary hospital because of a small wound unclear in origin. The wound was cleaned and treated with antibiotics. Despite the therapy, the wound swelling increased rapidly, showed suppurative fistulation and pain. A tissue sample from the infected area was taken for investigation; an MRSA infection was verified by culture and sensitivity.

The clinic tried a further therapy with selected combinations of antibiotics that were changed several times. But this also showed no improvement. Swelling, fistulation and pain became worse. As a last resort a wide-scale excision of the diseased tissue was considered which was carried out very carefully. But the wound after a few days, showed a dehiscence with massive infection. The clinic advised the euthanization of the dog, as the infection and pain became too strong and was no longer manageable. There was no chance of healing any more.

At this stage the dog came to me. The wound showed a highly destructive infiltrative infection. The granulation tissue was tubercular and incredibly secretive (Figure 4). At the beginning of the Laser Acupuncture medical therapy (antibiotics and anti-inflammatory drugs) was spontaneously discontinued.

In addition to LLLT of the wound with the frequency A’ for 10 minutes the immune stimulating points TH 5 (Thymus point) and SP 4 (Interferon inducing point) were treated. Already during the first session the wound showed a typical spontaneous superficial secretion and a spontaneous reduction in pain could be observed. After 10 days (5 treatments) a signifi-
cant contraction with beautiful epithelisation and clean granulation tissue was seen (Figure 6). One month after the start of Laser Acupuncture the wound had healed without a visible scar (Figure 5).

Figure 4 MRSA infection in a dog before and after Laser Acupuncture treatment

Figure 5

Figure 6
3. **Disturbing foci.** In other cases we see very often that the wound only seems to heal on the skin surface and is closed but doesn’t heal properly inside. Wound demarcation stopped inside the wound and there are small granulomas formed under or in the scar. These granulomas can work as the typical disturbing foci or perturbative fields which we see regularly as causal trigger factors in chronic allergic and chronic degenerative disease. In cases of badly healed, old scars, laser treatment provokes exacerbation of the granulomatous tissue and exudation of necrotic tissue (that had been stored inside the granuloma). So the healing of the primary wound, especially the non-demarcated tissue starts again and a final healing will be achieved. The following acupuncture points should be stimulated: LIV 3, SP 2 and to improve demarcation TH 5 and KID 3. In cases of wound infection we add SP 4. What can happen from these granulomas and the way to treat this, I will describe in a case report.

**CASE REPORT 3**

A femur fracture in a dog was fixed by a metal plate. After healing of the fracture, the limb of this dog was completely paralysed. There were no reflexes and no sensitivity in the whole leg, including loss of conscious proprioception and deep pain. Hoping to help the dog, the plate was removed by a second surgery, but the limb didn’t improve within the next year. Now the dog came for acupuncture treatment. There were still no reflexes and no sensitivity. The musculature was completely atrophied in the leg. It was only skin and bone. The operation wound looked nasty but was closed completely. Beneath and beside the scar one could only feel the femur bone. In the scar I found a severe disturbing focus (by RAC reaction to the laser frequency A’). After two treatments with two days interim as described above the wound that had been closed for one year opened and started demarcation.
During the next two days the scar became more and more swollen and showed fluctuation. A big abscess developed and after a further two days 150 ml of pus came out when the abscess opened. Now I started to treat the neurological problem, treating the Shu points from Kidney to Large Intestine, that all showed strong RAC reaction with frequency C and the Governor Vessel between the spines with frequency E, according to the spinal cord in the same area. Also a strong reaction was shown on frequency E medial along the femur bone. I believe it was a part of the sciatic nerve. Additionally the point KI 4, the influential point of nerve tissue, was treated with Fr. E. This treatment was carried out for one further month daily by the owner with a rented impulse laser 90 Watt. When the patient came for the next visit after this time, the dog was able to stand on the leg and to move a little bit. All reflexes could be generated and the skin sensitivity was back again. The treatment was stopped. At the next visit in my practice 2 months...
later the dog walked and ran perfectly and the muscles had developed again. The dog was completely restored. This example shows us that disturbing foci can provoke severe problems like complete paralysis and treatment of the disturbing focus opens the door to healing.

4. **Abscesses and phlegmonia (cellulites)** Laser treatment is also exceptionally useful in local inflammations. In very many cases phlegmonic processes, e.g. after the infection of wounds, in mastitis and even in acute to sub-acute thrombophlebitis can be cured when previous treatment with antibiotics have proved ineffective. Much easier, fresh infections can be treated before antibiotics have been applied. Laser irradiation also has an outstanding effect on the maturation and demarcation of abscesses (see case study above). This also applies, for example, to hoof ulcers or infected inflammations of the hoof dermis which do not mature and diffusely spread into the rest of the hoof dermis and which are normally very difficult to manage.

5. **Infections of the navel and fistulas of the urachus.** Navel infections often cause navel hernias in dogs and foals. Especially in foals we also see infections starting from the navel and leading to severe general joint infections. In foals we also see sometimes that the urachus doesn’t close after the umbilicus cord is ruptured and urine is dripping out of the umbilicus. With laser acupuncture we can do the best prophylaxis I can imagine for all these problems. We treat the navel with frequency A’ for 30 sec each and TH 5 and SP 4 (with their special meridian frequency according to Reininger or needle acupuncture). In cases when infection has already taken place we must treat the navel much longer (3-5 minutes with Frequency A’ or 20 sec with fr. A’’). In urachal fistulas in foals we find a strong RAC reaction in the area of CV 9 that we also treat with frequency A’/A’’. Acupuncture points are TH 5, SP 4 and KI 3. With this treatment we also can avoid disturbing foci in the navel.

6. **Acute infections of organs.** Even acute organ infections can be treated by laser acupuncture using the same basic points with additional LLLT. Beside the **Immune Wake up Points** we only have to treat the organ point at the ear or their corresponding body point*. These are: KI 7 for the kidneys, Lu 7 for the lung etc. (see the corresponding body points in figure 8). This is accompanied by LLLT of the organ with fr. A’/A’’. The LLLT of course is more effective in superficial and smaller organs than the bigger organs which are covered deeper in the body. So LLLT is considered more when infection starts with tonsillitis, sinusitis, pharyngitis, laryngitis,
mastitis or bladder infection. Here we can stop infection in the state of a Biao illness before it goes deeper in the body and develops a Li illness like pneumonia, intestine or kidney infection.

*Ear acupuncture aroused from western thinking. So we knew the point of the organ “Thymus” at the ear and the “Interferon inducing point” at the ear for now more than 40 years. About 15 years ago we started to transpose the body points to the ear as well. There we found TH 5 at the same place at the ear as the former known “Thymus point”, SP 4 at the same place as the “Interferon point” and many other important body points in the place of organ, glandular and hormonal points that had been known on the ear before. This was the moment, when ear- and body acupuncture as well as eastern thinking and western thinking came together in harmony.

But even when this has already happened, we can use the concept successfully. I personally see the best results when I don’t use any drugs additionally to laser acupuncture. So I treat these diseases without antibiotics in every case. But one must prove conscientiously in every special situation what is the best for the patient.
CONCLUSION

These examples and hundreds of successfully treated patients with infectious diseases show that Laser Acupuncture should be considered as a very efficient anti-infective therapy. This is even true for patients that did not respond to antibiotic or other anti-inflammatory therapies.
Reference

The Status of Traditional Chinese Veterinary Medicine in China
Xiuhui Zhong, DVM, PhD, Aituan Ma, DVM, PhD,
Xinghua Zhao, DVM, PhD, Xin He, DVM, PhD
Department of Traditional Chinese Veterinary Medicine
College of Traditional Chinese Veterinary Medicine
The Agricultural University of Hebei, Dingzhou 073000, China

INTRODUCTION:

Traditional Chinese Veterinary Medicine (TCVM) has a long history in China. It’s been carried down from generation to generation for more than 5000 years. Because 20th century medical practices have routinely over-prescribed antibiotics, the notion of a natural, traditional veterinary medical system with virtually no side-effects is intriguing to say the least. TCVM is such a medical system and has been introduced to other countries in the last century. However, until the last 1950’s this sophisticated and systemized art was not taught in schools or in Universities in China. The first school of TCVM was established in Dingxian county, Hebei province by the Ministry of Agricultural of People’s Republic of China in 1956. From then on TCVM was studied and applied in clinical practice all over China. The present paper will discuss the status of TCVM in China and try to give a profile of TCVM in China to the readers and audience.

EDUCATION OF TCVM IN CHINA

Education of TCVM in the College of TCVM Agricultural University of Hebei. Before 1950’s, TCVM was studied by personnel with a “Master” who has grasped this art. There was no school for people to study TCVM. On January 5, 1956, the Chinese late Prime Minister Mr. Zhou Enlai signed and issued the State Council’ s Instruction on Enhancing the Work of TCVM Veterinarians. Then the Agricultural Department of the Hebei province (ADHBP) sponsored and organized the TCVM Training Class in the Hebei Province. In the beginning, TCVM experts from all over China were called together to discuss various TCVM subjects. Their clinical experiences were summarized and recorded to be used as instructional materials and text books on TCVM. In June of 1958, the TCVM Training Class was changed to the Hebei TCVM School. It was the first specialized school for the study of TCVM in China. In September of the same year, the schooling period was changed to 3 years and the school began to enroll its first students. On September 20, 1958, with approval of the Ministry of Agricultural of the People’s Republic of China, the school began its first National TCVM Training Class with students coming from all
the corners of the country. All the students were young teachers at their own Universities. Upon graduation in veterinary medicine major, they were selected to study TCVM. At the same time, the Ministry of Agricultural invited many famous Chinese TCVM practitioners such as Gao Guojing, Pei Yaoqing, Lu Buyun, Yang Hongdao, Yu Chuan, Jiang Cisheng, Zheng Zaojie, Zhouzheng, Xu Zigong, Xun Chongwen and others to teach the first class.

From 1956 to 1966, the school enrolled 975 students, held 17 terms of Advanced TCVM Studies and 4 National TCVM Training Classes. Their 975 graduates became the first group of key TCVM professors for all other Agricultural Universities and schools in China. A few of the famous TCVM professors are listed below:

- Dr Dalu Song, Nanjing Agricultural University, The vice-president of the 3rd and 4th China National Society of TCVM.
- Dr Li Xu, Qingdao Agricultural University, The vice-president of the 3rd and 4th China National Society of TCVM.
- Dr Dongcai Zheng, Sichuan Agricultural University, The vice-president of the 3rd and 4th China National Society of TCVM.
- Dr Baofeng Tian, Northeast China Agricultural University, The vice-president of the 3rd China National Society of TCVM.
- Dr Baolian Sun, Yangzhou University, The vice-president of the 4th China National Society of TCVM.

Other professors such as
- Dr Zhiyou Jiang at Inner Mongolia Agricultural University
- Dr Zhenglun Chen in Guizhou Agricultural University
- Dr Heling Li at Qinghai Agricultural University
- Dr Yonghai Dai at Shandong Agricultural University

It’s just because the education of TCVM in Universities started from this school, now people honor the College of TCVM Agricultural University of Hebei as “the birthplace of TCVM education”.

In its early stages, the school focused on compiling teaching materials. Its dozens of textbooks have been published by the Agricultural Publishing House of China, including Science of TCVM, Basic Theory and Diagnosis of TCVM, Science of Chinese Veterinary Herbal Medicine
and Formulas, Veterinary Acupuncture and Moxibustion, Ancient Works Selections of TCVM, TCVM Basic Theory, Science of Internal Disease of TCVM, and Science of Surgical Disease of TCVM.

The school was merged with the Department of TCVM, Agricultural University of Hebei and became the College of TCVM in June 2000. Presently, the college offers the major of Traditional Chinese Veterinary Medicine, to 3 year students, 4 year students, and 3 year Master students. The college offers training courses on TCVM, Veterinary acupuncture and herbal medicine to foreign students as well. For details you can contact: clock8078@126.com. Now there are more than 3300 students in the college of which one third study TCVM. The students will study at least 500 hours of TCVM lessons. They will also study other veterinary medical lessons before graduation. The main courses offered to the students include the basic theory of TCVM (80 hours), the diagnosis of TCVM (80 hours), herbal medicine (100 hours), herbal formula (100 hours), veterinary acupuncture (72 hours), therapeutics of TCVM (120 hours).

*Education of TCVM in other Universities.* There are about 50 Universities and colleges offering the major of veterinary medicine. TCVM is a compulsory course for veterinary students. The hours needed differs in different Universities. Some are listed below.
Table 1 Class hours of TCVM Course in Different Universities

<table>
<thead>
<tr>
<th>Universities</th>
<th>Class hours</th>
<th>University years</th>
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<tbody>
<tr>
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<td>Nanjing Agricultural University</td>
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<tr>
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<td>Guizhou University</td>
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<td>4</td>
</tr>
<tr>
<td>Anhui Science and Technological University</td>
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</tr>
<tr>
<td>Shandong Agricultural University</td>
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</tr>
<tr>
<td>Northwest Agricultural University</td>
<td>82</td>
<td>4</td>
</tr>
<tr>
<td>Qingdao Agricultural University</td>
<td>70</td>
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</tr>
<tr>
<td>Jilin Agricultural University</td>
<td>56</td>
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<tr>
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<td>Zhejiang Agricultural University</td>
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Typically, the TCVM course is divided into several parts. See Table 2.

Table 2. Class Hours of TCVM Course, an Example

<table>
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<th>Items</th>
<th>Lesson Hours</th>
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</table>

Data from Northwest Agricultural University

*Graduate Education of TCVM in China.* Master degree education in TCVM is offered in almost all Universities with veterinary medicine major. Veterinary students who pass the national exams are accepted to start their 3 year study for the Master degree. Here I will mention several of the Universities which offer TCVM graduate education.

*The Agricultural University of Hebei.* Master degree education started in Agricultural University of Hebei in 1995. Totally 36 students graduated. From the year 2007 this University offers PhD studies in TCVM.

*China Agricultural University.* The master education started in this University as early as 1981. The first MS student is Dr Quanxin Zhang, who is retired now. The second students are Dr Zhensheng Shi and Dr Xiuhui Zhong (Now the Dean of the College of TCVM). The advisor was Dr Chuan Yu, who established the China National Society of TCVM in 1979. Dr Yu was the first, second, third, and forth president of the China National Society of TCVM. Until today 57 MS students graduated.

*Nanjing Agricultural University.* Master degree education started in 1994 with 34 graduates. PhD education is offered from 2003.

*Jilin Agricultural University.* Master degree education started in 1981 with 26 graduates. PhD education is offered from 1999.

**RESEARCH AND CLINICAL APPLICATION**

There are two journals publishing TCVM papers and clinical reports. The Journal of TCVM (JTCVM) commenced in 1982 and publishes 6 issues each year. The Jiangxi Journal of TCVM
commenced in 1957 and publishes 6 issues per year. We calculated the papers published in each journal in the last 2 years. The results are listed below.

Statistics of papers published in the Journal of TCVM (JTCVM)

Table 1 Papers Published in JTCVM in 2007 and 2008

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<th>Total</th>
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</table>

Table 2 Research Papers Using Different Animals

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<th>Fowl</th>
<th>Rabbit</th>
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<td>27</td>
<td>5</td>
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Table 3 Subject Distribution of Papers in JTCVM in 2007 and 2008

<table>
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<th>2008</th>
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<td>Herbal Medicine</td>
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Table 4 Papers Classified According to Animal Species

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<th>Chicken</th>
<th>Horse</th>
<th>Dog &amp; Cat</th>
<th>Rabbit</th>
<th>Others</th>
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<td>23</td>
<td>26</td>
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35th International Congress on Veterinary Acupuncture
Papers published in the Jiangxi Journal of TCVM (JX-JTCVM)

Table 5 Papers Published in JX-JTCVM

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<th>Issue</th>
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<td>Total</td>
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Table 6 Subject Distribution of Papers

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<th>2008</th>
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<td>Acupuncture</td>
<td>Herbal</td>
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<tr>
<td>Total</td>
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</table>
Table 7 Papers Classified According to Animal Species

<table>
<thead>
<tr>
<th>Total</th>
<th>Pig</th>
<th>Cattle</th>
<th>Sheep/Goat</th>
<th>Chicken</th>
<th>Horse</th>
<th>Dog &amp; Cat</th>
<th>Mixed &amp; Others</th>
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<tr>
<td>435</td>
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<td>31</td>
<td>38</td>
<td>29</td>
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</table>

From the above tables we can see that there few reports on acupuncture application and fewer reports on clinical cases of dog and cats.
Sacro Iliac injuries are a common cause of performance limitation in many of our equine athletes. While this injury is quite common in sport horses, it often goes undiagnosed. The most common complaint from the owner/trainer of the equine athlete is “he just isn’t right behind” versus an obvious lameness. Many of these horses will have had their hocks injected recently with the response that “he is better but not right”. While the injury can occur in either of the two hind limbs, I find the right Sacro Iliac is injured more frequently than the left. The injury usually is caused by the horse doing the splits behind. Often times, this occurs when the horse is running in his paddock and slides to a stop. In race horses, it occurs in the turns with the outside hind leg extending up and across the midline when he is at full extension. In the Jumpers and Event Horses, it can occur when the horse gets in too deep to a jump and he has to rock back over his wide spread hind legs. This injury could also occur during a trailer ride if the horse slips and falls behind.

When this injury occurs, you not only get pain from the injury to the Sacro Iliac ligament but also to the sciatic nerve. The sciatic nerve runs over this region and the horse will develop “Sciatica” secondary to the injury. This causes pain that can run down the entire hind leg making a diagnosis based on visual exam and nerve blocks very difficult to localize.

Diagnosis is based on palpation of the classical point Yan Chi. This point is located in a large depression approximately 1/3 the distance from the Tuber Coxa to the Tuber Sacral. Sometimes it is easier to elicit a response by reaching across the Tuber Sacral from the opposite side and palpate firmly back towards the Tuber Sacral. Warm Blood breeds often require palpation with a firm object such as a needle cap due to their stoic nature. A positive reaction on palpation of Yan Chi is diagnostic for a Sacro Iliac injury. Some horses are so sore that you can literally drop them to the ground with just digital pressure. Yet, they will not really be lame, just weak or “not right behind”.

My treatment of this injury begins with an adjustment of the Sacro Iliac joint. This is done by holding the hind limb in flexion (like a hind limb flexion test) and then a quick, non forceful abduction of the hind limb to about a 45% angle from the vertical standing position.
Often times you may hear a soft “click” at the Sacro Iliac joint with this maneuver. Next I place 22 gauge 1 ½ inch injection needles at the following points:

- BL 40 (master Point for the caudal back)
- BL 25 (local point for lumbar/Sacral area)
- Yan Chi (Local Point for Sacro Iliac)
- GB 34 (influential point for ligaments and tendons)
- Bai Hui (place of 100 meetings, where all Yang meridians merge)

I usually treat BL 25 bilateral, the rest of points are treated only on the side of injury.

You may use Vitamin B12 but I personally like to do hemo acupuncture on Bai Hui, BL 25 and Yan Chi the first treatment. I will usually inject 3cc of the horses own whole blood at each point. Then depending on results, I will treat with blood again or just vitamin B12 on the second exam usually 2 weeks after the initial exam. I do not use electro acupuncture very often for this condition. The time involved in electro acupuncture this condition increases the treatment time by at least 20 minutes and I have not personally found any greater results than with the above methods.

I usually give these horses 48 hrs of rest/turn out after their initial treatment. On day three they are ridden “long and loose” and then they go back into regular work. I like to recheck these horses in two weeks. They need to work and start strengthening the injured Sacro Iliac ligament so that the soft tissue surrounding the injury can help support it. After a second treatment with same protocol as above, I will recheck them in 30 days. The majority of these horses are doing very well after the second treatment. I usually expect at least a 60% improvement after the first treatment and 80% plus improvement after the second treatment. These horses are kept in work during this treatment time and many continue to compete. I add Tui-Na massage to the take home therapy for these horses by their owners. The two main massage techniques I send home are “Ca-Fa” (friction rub) and “Ji Fa” (Tom Tom). These Tui-Na techniques have greatly reduced the healing time required for this injury.

My experience has been that if you treat this injury conservatively with just 6 months rest, they will be very good for the first 2 to 3 weeks they are put back in training and then they will start having problems again. Shock wave therapy will make these horses better for about 9 days and then they will be sore again. Cortisone injections will be of some benefit but the results
are short term at best. Adjustments and Acupuncture has been very rewarding in treating this injury.

Make sure you evaluate the shoeing and that the horse is trimmed in proper angles and that he is landing equally on both branches of his shoes. It is surprising how many horses have borium on just the outside or inside branch/heel of there shoe. Racing plates can also have just an “outside sticker” which will greatly aggravate this condition.

Start palpating Yan Chi and you will be surprised at how many horses will be positive to palpation of this point. I have one veterinarian who anytime he examines a horse for a hind end problem, walks up to the horse, palpates Yan Chi and if he is positive to palpation, he says “Have Dr. Casey fix his Sacro Iliac and then bring him back if he is not 100%”. You will be amazed at how many horses you will move up in their athletic ability when you address this injury.
“We learn the most, when we are teaching”

The last few years I have had very good experiences with teaching the owners to support my (acupuncture-) therapy with acupressure. On the basis of the Book by Ina Gösmeier I collected a lot of experiences with my clients and produced a DVD to teach rider and horse owners. I can really recommend it to all colleagues.

Why could this be interesting for you?
- You give the owners more individual responsibility and freedom of decision
- The owners get a better feeling, awareness and relationship with their animals
- Your therapy works faster and better $\rightarrow$ Therapy-Costs $\downarrow =$ Save owners money
- You win and save customers loyalty by giving them competence
- New source of income, if you like to teach people and share your knowledge

Especially in times of worldwide financial depression, I think it is important to teach the people how they can support the therapy, that it is a way they can save money. Therefore, many clients will be even more satisfied with your therapy and refer you to others. Another possibility is to share your knowledge and competence and if you like to teach people it can be a new source of income as well.

Suitable Acupressure-Points. Whenever you come to a client you are doing your acupuncture-diagnosis and –treatment. The following acupuncture points are suitable for continuing acupressure treatments:
Yintang - CV 24 - GV 26
GB 20 - BL 10 - LI 16
SP 21 - LU 7 - LI 4
SI 3 - ST 36 - SP 6
KI 3 - LIV 3 - BL 60
GB 41

Ting Points (specific or non specific acupressure on the coronary band)

Other points can be used as well for the acupressure treatment.

Pre-Treatment: First ask your client, if he wants to do acupressure to support your therapy!
(Most of them want, but if they don’t, you are not losing your time)
Select up to 5 points fitting to your treatment strategy.
To make it easy for the owner to find the points on the horse:
- Cut the hair (if long enough) with scissors
or mark the point with a permanent marker (white, black, red)
- Draw the points on a chart

Figure 1 Chart with marked points for the owner
Treatment: Instruct the owner to put pressure on the acupuncture point and press clockwise with changing intensity for about one minute. The acupressure treatment can be done with forefinger, thumb, thenar eminence, palm of ones hand, or the knuckles. It will depend on the texture of the point and the reaction of the horse.

Point work is performed generally from front to rear and top to bottom.

Figure 2 Acupressure on Yintang with the palm of ones hand

Figure 3 Acupressure on BL 10 with forefinger

It is important to observe the reactions of the horse. The acupressure treatment should always be comfortable and relaxing for the horse. Obvious reactions include lowering his head, twisting his neck and hollowing his back. Other releases in response to a treatment include: muscle spasms, chewing, excessive licking, yawning, closing the eyes, stretching, and moving away from or into the point which is worked on. Equally important are the more subtle signs the horse may display, such as facial expression, softening the eye, or relaxation of the mouth, chin.
or ears. Notice the changes in rhythm of the horses breathing and in his gut sounds. On the re-
action of the horse everyone can check if the point is treated on the “right” location with the
“right” intensity.

Figure 4 Relaxing acupressure treatment on LI 16

Post-Treatment: The horse should rest for 2 - 24 hours before resuming training.

Some horses are full of energy and can be worked right after the treatment; others need
more time to complete the rebalancing of energy.

Table 1 Established Acupressure-Treatments for Specific Conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>Points</th>
</tr>
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<tbody>
<tr>
<td>Opening for healing: (resistance to therapy)</td>
<td>LI 4, LIV 3</td>
</tr>
<tr>
<td>Yin-Yang-Balancing</td>
<td>Yintang, GV 26, CV 24</td>
</tr>
<tr>
<td>Mental Support</td>
<td></td>
</tr>
<tr>
<td>Anxiousness, Nervousness, Insecurity</td>
<td>SI 3, KI 3</td>
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<tr>
<td>Aggressiveness</td>
<td>LIV 3, GB 41</td>
</tr>
<tr>
<td>Excessive Reactions</td>
<td>SP 6, ST 36</td>
</tr>
<tr>
<td>Inactivity, Laziness</td>
<td></td>
</tr>
<tr>
<td>Senior Horses</td>
<td>SP 6, KI 3, ST 36</td>
</tr>
<tr>
<td>Immune System Strengthening</td>
<td>LI 4, LU 7, GB 20, KI 3, ST 36</td>
</tr>
<tr>
<td>Neck-Problems</td>
<td>GB 20, BL 10, SI 3, LI 4</td>
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<tr>
<td>Back-Problems</td>
<td>BL 10, LI 16, SI 3, BL 60, GB 41, SP 6, LIV 3</td>
</tr>
<tr>
<td>Allergies</td>
<td>GB 20, SP 21, LU 7, LI 4, ST 36</td>
</tr>
</tbody>
</table>
Diagnostic Criteria for Dermatologic and Endocrine Disharmonies
Bruce Ferguson, DVM, MS
Adjunct Senior Lecturer, School of Veterinary Medicine
Murdoch University, Perth, Western Australia, Australia

PRELUDE:

A body may respond to a pathogenic factor by becoming: Excess/stagnant; Deficient/weak; Warmer; Cooler; Damper/moister; Drier; or other, more complex changes. If we use the TCVM Classical Eight Principle Pathogenic Processes diagnosis, we speak of Hot/Cold, Excess/Deficient and Internal/External. But this may be modified (with a nod to TGM, Traditional Greek Medicine) into Endocrinological Yin and Yang and Dermatological Yin and Yang Pathogenic Processes. In other words, is this problem Excess or Deficient? Is the pathogenic process in the patient evolving as an Excess or Deficiency? If the pattern is Excess, the treatment principle is to Sedate or Drain the Excess. If the pattern is Deficient, the treatment principle is to Tonify or Nourish. Next, Is the pathogenic process in the patient evolving as a Hot or Cold process? If Cold, the treatment principle is to Warm the Channels, Interior, or Dispel Cold. If Hot, the treatment principle is to Cool, Release the Exterior, Clear Heat or Drain Heat. Is the pathogenic process in the patient evolving as Dampness or Dry? If the pattern is Damp, the treatment principle is to Dry or Drain Damp. If the pattern is Dry, the treatment principle is to Moisten, Nourish Yin or Nourish Blood.

Back to the Basics: Ba Gang or Eight Principles is a diagnostic system that relies on heteropathic treatment. The First Question is, is it a problem of Excess, is it a problem of Deficiency, or is it a mixed Excess/Deficiency? The Treatment Principles are to Reduce Excess, Supplement Deficiency, or Both Reduce and Supplement, but judiciously with patient’s response to treatment as a guide. What does Excess mean? Excess vs Deficiency reveals the quantity or strength of the disharmony or pathogenic factor relative to the antipathogenic factor. Excess refers to a strong pathogenic factor (Xie Qi) and a relatively strong antipathogenic factor. Excess also refers to an excessive quantity or an accumulation of a fundamental substance (Qi, Blood, Body Fluids) or to a pathological product (Food Accumulation), or to an excessive or hyperactive Organ (Zang Fu). What does Deficiency mean? Deficiency refers to a weak antipathogenic factor, an insufficient quantity of a fundamental substance, or an insufficient or hypoactive Organ. In the most basic
sense, in an Excess condition, the body’s Zheng Qi is relatively strong (uncompromised). In a
Deficiency condition the body’s Zheng Qi is weak (compromised).

*Treatment Principles:* Discover which fundamental substance is Excess or Deficient and directly
reduce or supplement that fundamental substance. Discover which Zang Fu organ has Excess or
Deficiency function and directly reduce or supplement that Zang Fu organ.

*Characteristics of Excess:* Excessive body substances, fluids, discharges; Excessive body
sounds; snoring, coughing, flatulence, borborygami; Full pulse; Thick tongue coating.

*Characteristics of Deficiency:* Deficient or lack of body substances, fluids or discharges; Low
energy, fatigue, relatively quiescent body sounds; Weak or thin pulse; Lack of appreciable ton-
gue coating. However, in the case of Qi or Yang Deficiency the tongue may have excessive
moisture.

*Clues to Excess and Deficiency:* If allopathic medicine works or gives a strong positive response,
Disharmony is Excess (e.g. drugs to reduce adrenal or thyroid function; antimicrobials which
reduce skin infections). If allopathic fails to work or is only marginally effective, the Dishar-
mony is Deficient. The exception is replacing physiological deficits such as thyroid hormone or
adrenal hormones. Western Biomedical Example: A patient with inadequate hydrochloric acid
secretion in the stomach has both Deficiency of hydrochloric acid (a substance) and Deficiency
of parietal cell activity (an “organ” or organelle). Treatment may include supplementing Hy-
drochloric acid (or reducing intake of buffers and bases), or hypothetically tonifying the parietal
cells. TCVM Example: A canine patient with fatigue, reduced appetite, loose stools, a pale ton-
gue and weak, slippery pulse has Spleen Qi Deficiency with Dampness. Using the herbal formula
*Shen Ling Bai Zhu San* we can Tonify the weak Zang Fu Organ (Spleen), Dry the Excess Sub-
stance (Dampness).

The Second Question is, is it a problem of Cold, is it a problem of Heat, or is it a mixed
Cold/Heat problem? The treatment Principles are to Warm the Cold (Possibly Release the Ex-
terior with Warm herbs or Purge Cold), or Cool the Heat (Possibly Release the Exterior with
Cool herbs or Clear and Drain Heat).

*Characteristics of Hot:* Hot Disharmonies may have one or more of the following clinical signs:
Increased body temperature, Warm nose, Warm ears, Red tongue (yellow coating if there is one),
Rapid pulse; Irritability and restlessness, Dryness if chronic, Hot and/or red lesions, Yellow or
yellow-green discharges. Western Biomedical drugs such as NSAIDs, corticosteroids and antibiotics have a Cold nature and tend to improve Hot disharmonies.

Characteristics of Cold: Cold Disharmonies may have one or more of the following clinical signs: Cold nose, Cool ears, Pale or pale-pink tongue (white coating), slow pulse, Lethargy, Cool or body-temperature lesions, Clear discharges. Western Biomedical drugs such as NSAIDs, corticosteroids and antibiotics have a Cold nature and tend to exacerbate Cold disharmonies.

Hot and Cold: Heteropathy. Hot disharmonies are treated with cooling herbs, foods and acupuncture techniques. Cold disharmonies are treated with warming herbs, foods and acupuncture and moxibustion techniques. Treating a Hot Disharmony, such as chronic gingivitis/stomatitis with a warm nose, red tongue, malodorous breath, and a rapid pulse; what is termed “Stomach Heat” in TCVM, you would choose herbal formulas such as *Yu Nu Jian*, Jade Woman Decoction, which drains heat from the Stomach and nourishes the Yin. Useful foods to add to the diet would include watermelon and avocado. Acupuncture points for “Stomach Heat” should include LI 4, LI 11, and ST 44.

If treating a Cold Disharmony with weak and cool lumbus and stifles, frequent profuse clear urination, pale moist tongue, and deep weak pulse would be termed “Kidney Yang Deficiency” in TCVM, an appropriate herbal formula might be *Jin Gui Shen Qi Wan* Kidney Qi Pill from the Golden Cabinet to warm and tonify the Kidney Yang. You could consider adding foods such as ginger and lamb to the diet. Acupuncture at BL 23, GV 4, Bai Hui, and the use of moxa would be called for in a cold patient such as this.

The third Question is, is it a problem of Damp or is it a problem of Dry? The treatment Principles are to Dry the Damp (Possibly Drain Damp, Dry Damp or Tonify Spleen, Qi or Yang), or Moisten the Dry (Possibly Increase Body Fluids, Nourish Yin or Tonify Blood).

Characteristics of Dry: Dry Disharmonies may have one or more of the following clinical signs: Dry nose, Dry tongue, Dry skin/hair, Dry footpads/hooves, Thirst, Thin or tight pulse.

Characteristics of Damp: Damp Disharmonies may have one or more of the following clinical signs: Moist nose, Moist tongue with thick coat, Oily or seborrheic skin, Oozing skin lesions, Edema/Ascites, Dysuria/stranguria, Lack of thirst, Slippery pulse.

Dry and Damp: Heteropathy. Dry disharmonies are treated with moistening (as well as Yin- and Blood nourishing) herbs and foods, and acupuncture points. Damp disharmonies are treated with
Drying and Draining herbs, foods and acupuncture needle techniques and point combinations. For example, treating a Dry Disharmony such as chronic low-grade cough with dry nose, red, dry tongue and thin, rapid pulse, termed “Lung Yin Deficiency” in TCVM, would use the herbal formula *Bai He Gu Jin Tang*, Lily Bulb Preserve the Metal Decoction, which nourishes the Yin, moistens the Lungs and stops coughing. Additional dietary supplements with a cool, moist or phlegm-resolving character would include foods such as apple, pear, or almond. Acupuncture points to benefit the lung and nourish Yin would include LU 7, BL 13, and SP 6.

Treating a Damp Disharmony with Edema, dysuria/stranguria, diarrhea with little odor, thick tongue coat and slippery pulse could be called “Accumulation of Dampness” in TCVM. A useful herbal formula would be *Wu Ling San*, Five-Ingredient Powder with Poria, which promotes urination, drains dampness, and strengthens the Spleen. Foods which serve as mild diuretics which can help regulate excess damp in the patient include celery and kelp. Acupuncture to regulate damp and benefit the normal metabolism of damp in the body includes SP 9, BL 20, and ST 36.

Remember to Get the Basics Right! Supplementing an Excess Pattern or draining a Deficient Pattern could potentially lead to a medical disaster. Cooling a Cold Pattern or warming a Hot Pattern will almost certainly be a treatment failure. Drying a Dry Pattern or Moistening a Damp Pattern can lead to symptom exacerbation.

*Simplified Clinical Signs*: Tongue color, moisture and coat; Ear temperature; Pulse rate and diameter; and qualities of endocrine and dermatologic diseases may give us adequate information to make a provisional TCVM diagnosis. Tongue Inspection is based upon Tongue Body Color: Cold Conditions- Body Pale (Coating White); Heat Conditions- Body Red (Coating Yellow). Tongue inspection is also based upon tongue body shape and coating: Excess- Shape (swollen/stiff) and Thick, Deficient- Body Color (pale Qi, Yang and Blood, red Yin), Deficient- Body Shape (flaccid, thin); Coating (none). Dry may suggest: Body Color (pale is Blood deficient, red is Yin deficient or chronic Heat), while Damp shows: Body Color (pale is Qi or Yang Deficient, red is Excess Heat).

Ear Temperature and Odor may be used to discern a pattern of disharmony. Hot Ears may be from Heat Patterns, Full Heat or Yin Deficiency. Cold Ears may indicate Excess Cold, Blood or Yang Deficiency. Malodorous and Moist Discharge from the ears suggests Gallbladder Damp-
heat since the Gallbladder and San Jiao Channels enter ear. Touching or Palpation includes Feeling the Pulse. The following pulse characteristics have these correlates: Strong = Excess; Weak = Deficiency; Rapid = Heat; Slow = Cold; Thin or Rough = Dry; Full or Slippery = Damp.

General Considerations: Prior western biomedical treatment responses are revealing. Hormonal supplementation is Tonifying; prior positive response suggests Deficiency. Antibiotics tend to be cooling and clear damp-heat; prior positive response suggests Heat and/or Damp-Heat. Steroids tend to be initially cooling; prior positive response suggests Heat. What are Hormones in TCVM? Hormones are a form of Jing. Jing or Kidney Essence has a fluid-like nature but Yang functions. These TCVM functions are those typical of modern hormones: Growth; Reproduction; Development; Sexual maturation; Conception; and Pregnancy.

Qualities of Endocrine Disorders: Excess. There is great variability within the endocrine system, but excess qualities may include: Organ or System Over- or hyperactivity; Excessive body heat or catabolism; Red tongue, possible yellow coating; Warm ears; and a Rapid, full or taut/wiry pulse.

Qualities of Endocrine Disorders: Deficient. There is great variability within the endocrine system, but deficient qualities may include Organ or system hypoactivity; Deficient heat or body catabolism; Possible relative excessive anabolism; Pale tongue, commonly no coating; Cool ears; and a Slow, weak, deep pulse.

Qualities of Endocrine Disorders: Hot. Heat tends to rise to the upper part of the body and includes disharmonies that Create excessive activity or anxiety; are physically hot; increased biochemical markers of inflammation.

Qualities of Endocrine Disorders: Cold. Cold disharmonies tend to slow catabolic processes and lead to reduced activity and catabolism; reduced tissue and body heat; normal or low values of biochemical markers of inflammation. Cold and/or Damp endocrine disharmonies may include hypoadrenocorticism, hepatic fibrosis, hepatic lipidosis, and chronic jaundice.

Qualities of Endocrine Disorders: Damp. Damp conditions are common and have the discouraging characteristics such as not easy to treat and get rapid resolution; tend to linger for a long time; and tend to be heavy and sticky. Common Damp conditions may include inflammatory hepatopathies and some types of jaundice.
Qualities of Endocrine Disorders: Dry. Most common underlying (root or ben) cause of recurrent Wind and Dryness is Blood Deficiency. Blood deficiency tends to lead to chronic low-grade endocrine disharmonies with other Blood Deficiency signs. Blood deficiency may often be Western Biomedical endocrine diseases. No change in thirst correlated with Blood Deficiency. Worse with corticosteroids correlated with Kidney or Liver Blood Deficiency.

General Considerations: Dermatological disharmonies that tend to get better with Western Biomedical treatments are usually problems of Excess. Dermatological problems that tend to not change or get worse with Western Biomedical treatments are usually problems of Deficiency. Prior western biomedical treatment responses are revealing. Antibiotics tend to be cooling and clear damp-heat. Prior positive response suggests Heat and/or Damp-Heat. Steroids tend to be initially cooling. Prior positive response suggests Heat.

Qualities of Dermatological Lesions: Excess. Excess disharmonies may have one or more of the following: Excessive body substances, fluids, discharges; Thickened and oozing skin lesions; Greasy or oily coat; Full pulse; Thick tongue coating.

Qualities of Dermatological Lesions: Deficient. Deficient dermatological disharmonies may have one or more of the following: Deficient or lack of body substances, fluids or discharges; Thin skin or skin lesions; Weak or thin pulse; Lack of appreciable tongue coating. However, in the case of Qi or Yang Deficiency the tongue may have excessive moisture.

Qualities of Dermatological Lesions: Hot. Heat tends to rise to the upper part of the body and includes disharmonies that have papular eruptions, are physically hot, create itching and pain, are commonly swollen, and present with erosions with purulent discharge.

Qualities of Dermatological Lesions: Damp. Damp conditions are common and have the discouraging characteristics such as not easy to treat and get rapid resolution, tend to linger for a long time, tend to be heavy and sticky. Common Damp conditions may include itching, papular eruptions, and secretory or excretory skin products.

Qualities of Dermatological Lesions: Dry. Most Common Underlying (Root Or Ben) Cause of Recurrent Wind And Dryness Is Blood Deficiency. Blood Deficiency Tends To Lead To Chronic Skin Disharmonies; These May Often Be Western Biomedical Endocrine Diseases. No Change In Thirst Correlated With Blood Deficiency. Worse With Corticosteroids Correlated With Kidney Or Liver Blood Deficiency.
References/Suggested Readings


Choosing Herbal Formulas for Dermatologic and Endocrine Disharmonies
Bruce Ferguson, DVM, MS
Adjunct Senior Lecturer, School of Veterinary Medicine
Murdoch University, Perth, Western Australia, Australia

PRELUDE:

A body may respond to a pathogenic factor by becoming: Excess/stagnant; Deficient/weak; Warmer; Cooler; Damper/moister; Drier; or other, more complex changes. If we use the TCVM Classical Eight Principle Pathogenic Processes diagnosis, we speak of Hot/Cold, Excess/Deficient and Internal/External. But this may be modified (with a nod to TGM, Traditional Greek Medicine) into Dermatological Yin and Yang Pathogenic Processes. In other words, is this problem Excess or Deficient? Is the pathogenic process in the patient evolving as an Excess or Deficiency? If the pattern is Excess, the treatment principle is to Sedate or Drain the Excess. If the pattern is Deficient, the treatment principle is to Tonify or Nourish. Next, is the pathogenic process in the patient evolving as a Hot or Cold process? If Cold, the treatment principle is to Warm the Channels, Interior, or Dispel Cold. If Hot, the treatment principle is to Cool, Release the Exterior, Clear Heat or Drain Heat. Is the pathogenic process in the patient evolving as Dampness or Dryness? If the pattern is Damp, the treatment principle is to Dry or Drain Damp. If the pattern is Dry, the treatment principle is to Moist, Nourish Yin or Nourish Blood.

Choosing TCVM Herbal Formulas: You may choose formulas from a variety of companies in the USA. Most are manufacturers of human products and the quality tends to be good. Not all products are equal though; some company’s products may be more effective than others. Primary TCVM Herbal Companies include: Jing-Tang Herbs (purely veterinary, largest formula range), <www.tcvmherbal.com>; Institute for Traditional Medicine (ancient and modern formulas), <www.itmonline.org>; Mayway (good range, various forms), <www.mayway.com>; Crane Herbs (carry formulas from multiple manufacturers, on-line herbal pharmacy), <www.craneherbs.com>.

Herbal Dosages: The dosage will never be “exact”, but may vary with herbal form or preparation, disharmony or disease process, age and strength of the patient. If there is concern about possible gastrointestinal upset (most common side effect of herbal formulas): give 1/3 final dose Q12H for first two days; give 2/3 final dose Q12H for next two days; give full dose Q12H thereafter. Give 1/3 of final dose Q12H for first two days; if vomiting, diarrhea, lethargy, anorexia
occur stop herbal, wait two days, and try again. Give 2/3 final dose Q12H for next two days, if vomiting, diarrhea, lethargy, anorexia, reduce to 1/3 dose, wait two days, and try again. Give full dose Q12H thereafter; if vomiting, diarrhea, lethargy, anorexia, reduce to 2/3 dose, wait two days, and try again.

Capsule: Canine: 1-2 capsules (0.3-0.6 gram)/10 kg body weight Q12H to Q24H; Feline, 1 capsule (0.25-0.5 gram)/cat Q12-24H.


Dosages for Large Animals are as follows: Raw herbal powder; Foal: top-dressing 3-8 grams with food; Pony: top-dressing 10-20 grams with food Q12H or tubing 150-250 grams Q24H; Horse: top-dressing 15-30 grams with food Q12H or tubing 200-400 grams Q24H. Extract granules may be dosed as follows: Foal: 1-2 tsp Q12H; Pony: 3-5 tsp Q12H; Horse: 6-9 tsp Q12H.

*Herbal Formulas for Excess Dermatological Disharmonies:* Excess Dermatological disharmonies rarely occur in isolation. Excess commonly occurs with conditions of Damp and/or Heat. Excess disharmonies commonly are manifestations of “Excess” from root Deficiencies. For example, Excess Damp may be generated from chronic Spleen Qi Deficiency (gastrointestinal weakness).

*Herbal Formulas for Deficient Dermatological Disharmonies:* Qi Deficiency and Yang Deficiency may be correlated with many disharmonies. When seen with dermatological disorders, Qi or Yang Deficiency tends to lead to recurrent infections. Simplified Clinical signs may include: Pale, moist tongue, Cool ears, Weak pulse, and Weakness or Fatigue. Herbal Formulas for Qi or Yang-Deficient Dermatological Disharmonies are the following: For Global Qi or Yang-deficient clinical signs with recurrent infections choose:

- Shi Quan Da Bu Tang, Great All-inclusive Tonifying Decoction (classical formula, many manufacturers)
- Wei Qi Booster (Jing-Tang Herbs)
- Astragalus 10+ (ITM)

Deficiencies of Yin and Blood are the most common roots of Deficient Dermatological disharmonies. The manifestations tend to be varying degrees of Dryness and lack of Nutritional
support to the hair and skin. Yin Deficiency will have the signs of Dry, red tongue; Warm, but not hot, ears; Rapid, thin pulse; Red, dry or slightly hot skin lesions; Itching which is worse at night and in dry weather. For Global Yin Deficiency with dry, pruritic skin, choose:

- Zhi Bai Di Huang Wan, Anemarrhena, Phellodendron and Rehmannia Pill (classical formula, several manufacturers)
- External Wind (Jing Tang)
- Yang Yin Zhi Yang (Jing-Tang)
- Xanthium 12 (ITM)

For Yin Deficiency with dry, pruritic skin accompanied by mild coughing and dry fur choose *Bai He Gu Jin Wan*, Lily Bulb Preserve the Metal Decoction (classical formula, several manufacturers).

Herbal Formulas for Blood Deficient Dermatological Disharmonies vary slightly with the patient’s presenting signs. Blood Deficiency clinical signs include Pale, dry tongue; Normal to cool temperature ears; Thin and/or weak pulse; Dry, pale skin lesions For Global Blood Deficiency with dry, pruritic skin, choose:

- Si Wu Tang, Four Substances (classical formula, several manufacturers)
- Ku Shen Si Wu (Jing-Tang Herbs)
- Si Wu Xiao Feng (Jing-Tang Herbs)
- Shou Wu Tablets (ITM)

*Herbal Formulas for Hot Dermatological Disharmonies:* Hot dermatological disharmonies have clinical signs which include Red tongue, with or without coating; Warm to Hot ears; Rapid pulse; Red, malodorous skin lesions; Irritability and restlessness. For Hot Dermatological Disharmonies which have not yet become significantly Damp, choose:

- Xiao Feng San, Eliminate Wind Powder (classical formula, several manufacturers)
- Wind Toxin Formula (Jing Tang Herbs)
- Lonicera 13 (ITM)

*Herbal Formulas for Cold Dermatological Disharmonies:* Cold dermatological disharmonies are somewhat rare and tend to Overlap Yang-deficient disharmonies. For these cold disharmonies choose:
• Shi Quan Da Bu Tang, Great All-inclusive Tonifying Decoction (classical formula, many manufacturers)
• Ganoderma 18 (ITM)

*Herbal Formulas for Dry Dermatological Disharmonies:* Dry dermatological disharmonies are dry for two major reasons: Blood Deficiency and Yin Deficiency. The formula choices for Dry disharmonies may be seen in the previous Blood and Yin Deficiency section.

*Herbal Formulas for Damp Dermatological Disharmonies:* Damp dermatological disharmonies have clinical signs which include a moist tongue, commonly red; warm and/or malodorous ears; rapid, slippery or full pulse; lesions which are greasy or oozing. For Global Damp disharmonies which have combined with Heat choose:

• Huang Lian Jie Du Tang, Coptis Decoction to Relieve Toxicity (classical formula, many manufacturers)
• San Ren Tang, Three Nut Decoction (classical formula)
• Damp Heat Skin (Jing-Tang Herbs)
• Lonicera 13 (ITM)
  For Damp-heat in the Ears choose
• Long Dan Xie Gan Tang, Gentiana Decoction to Drain the Liver (classical formula, many manufacturers)
• Ear Damp Heat (Jing-Tang Herbs).
  For Damp-heat in the Feet choose
• Si Miao San, Four Marvels Powder (classical formula, many manufacturers)
• Four Paws Damp Heat (Jing-Tang Herbs).

*Herbal Formulas for Excess Endocrine Disharmonies:* Excess Endocrine disharmonies are usually due to problems with Stagnation, hormone over-production or iatrogenic (e.g. iatrogenic hyperadrenocorticism). Excess commonly co-occurs with conditions of Damp and/or Heat. Excess disharmonies sometimes are manifestations of “Excess” from root Deficiencies. Excess Heat of hyperthyroidism may sometimes have its root in Yin Deficiency. Endocrine disharmonies due to Stagnation may have a lavender tongue; taut/wiry pulse; warm ears; and possibly elevated Liver enzymes or Thyroid hormones. If Stagnation leads to elevated Liver enzymes with Heat signs, choose:
• Jia Wei Xiao Yao San, Added Flavor Rambling Powder (classical formula, many manufacturers)
• Liver Happy (Jing-Tang Herbs)
• Bupleurum-Gardenia Tablets (ITM)
  If Stagnation leads to elevated Thyroid hormones with Heat signs and Phlegm nodules in the neck, choose:
  • Hai Zao Yu Hu Tang, Sargassum Decoction for the Jade Flask (classical formula, many manufacturers)
  • Sargassum Jade Pot (Jing-Tang Herbs)
  • Prunella 8 (ITM)

Herbal Formulas for Deficient Endocrine Disharmonies: Qi Deficiency may be correlated with many endocrine disharmonies: Some phases of hyperadrenocorticism; some phases of diabetes mellitus; some phases of hypothyroidism. When seen with Endocrine disorders, Qi or Yang Deficiency tends to lead to various forms of organ weakness and chronic disease. Clinical signs may include a Pale, moist tongue; Cool ears; Weak pulse; and Weakness or Fatigue. For Qi deficient clinical signs in hyperadrenocorticism such as pale or red tongue and weak pulse, choose:
  • Jin Gui Shen Qi Wan, Kidney Qi Pills from the Golden Cabinet (classical formula, many manufacturers)
  • Rehmannia 11 (Jing-Tang Herbs)
  • Ginseng 6 (ITM)
  For Qi deficient clinical signs in diabetes mellitus such as pale or red tongue and weak pulse, choose:
  • Jin Gui Shen Qi Wan, Kidney Qi Pills from the Golden Cabinet(classical formula)
  • Rehmannia 11 (Jing-Tang Herbs)
  • Jiang Tang Cha (Jing-Tang Herbs)
  • Cuscuta 15 (ITM)
  For Yang Deficiency hyperadrenocorticism with clinical signs of pale, swollen tongue and deep, weak pulse, choose:
• Jin Gui Shen Qi Wan plus Shi Quan Da Bu Tang Great, All-inclusive Tonifying Decoction (classical formulas)
• Rehmannia 14 (Jing-Tang Herbs)
• Ganoderma 18 (ITM)

Deficiencies of Yin and Blood are common roots of Endocrine disharmonies. The manifestations tend to be varying degrees of Dryness and lack of Nutritional support to the organs, hair and skin. Yin Deficiency will have the signs of a Dry, red tongue; Warm, but not hot, ears; Rapid, thin pulse; Red, dry or slightly hot skin lesions; Itching which is worse at night and in dry weather. For Yin Deficiency with dry signs and hyperadrenocorticism, choose:
  • Zhi Bai Di Huang Wan, Anemarrhena, Phellodendron and Rehmannia Pill (classical formula, several manufacturers)
  • Ophiopogon Powder (Jing Tang)
  • Rehmannia 16 (ITM)
For Yin Deficiency with dry signs and diabetes mellitus, choose:
  • Zhi Bai Di Huang Wan, Anemarrhena, Phellodendron and Rehmannia Pill
  • Xiao Ke Fang (Jing Tang)
  • Tremella 14 (ITM)
For Yin Deficiency with Qi Deficiency and hypothyroidism, choose:
  • Sheng Mai San, Generate the Pulse Powder, symptomatic relief only (classical formula, several manufacturers)
  • Jia Bing Fang (Jing Tang)
  • Diagnostic Tablets (ITM)

Blood Deficiency clinical signs include a Pale, dry tongue; Normal to cool temperature ears; Thin and/or weak pulse; Dry, pale skin and hair. For Global Blood Deficiency with hypo-active endocrine organ or hepatic function, choose:
  • Si Wu Tang, Four Substances (classical formula, several manufacturers)
  • Si Wu Tang (Jing-Tang Herbs)
  • Shou Wu Tablets (ITM)

*Herbal Formulas for Hot Endocrine Disharmonies:* Hot Endocrine disharmonies have clinical signs which include a Red tongue, with or without coating; Warm to Hot ears; Rapid pulse;
Elevated Liver enzymes; Acute jaundice; Hyperthyroidism; Irritability and restlessness. For Hot Endocrine Disharmonies which have not yet become significantly Damp, choose:

- Zhi Bai Di Huang Wan, Anemarrhena, Phellodendron and Rehmannia Pill
- Ophiopogon Powder (Jing Tang Herbs)
- Tortoise Shell Tablets (ITM)

*Herbal Formulas for Cold Endocrine Disharmonies:* Cold Endocrine disharmonies are somewhat rare and tend to occur with chronic disorders such as hypoadrenocorticism, hypothyroidism, chronic jaundice, hepatic lipodosis, and hepatic fibrosis. These disharmonies may overlap Yang-deficient disharmonies. If they involve general metabolism, choose formulas in the Yang deficient section above. If they involve the liver, choose:

- Yin Chen Zhu Fu Tang, Artemesia, Atractylodes and Prepared Aconite Decoction (classical formula, many manufacturers)
- Yin Chen Zhu Fu (Jing Tang Herbs)
- Lotus Leaf Tablets 18 (ITM)

*Herbal Formulas for Dry Endocrine Disharmonies:* Dry Endocrine disharmonies are Dry for two major reasons: Blood Deficiency and Yin Deficiency. The formula choices for Dry disharmonies may be seen in the previous sections.

*Herbal Formulas for Damp Endocrine Disharmonies:* Damp Endocrine disharmonies have clinical signs which include a Moist tongue, commonly red; Warm and/or malodorous ears; Rapid, slippery or full pulse; Elevated Liver enzymes; and Increased biochemical markers of inflammation. For Damp disharmonies which have combined with Heat choose such as fulminating hepatopathies, choose:

- Long Dan Xie Gan Tang, Gentiana Decoction to Drain the Liver (classical)
- Long Dan Xie Gan Tang (Jing-Tang Herbs)
- Gentiana 12 (ITM)
RECAPITULATION:

Is the overall pattern Excess of Deficient? Excess conditions tend to have a tongue coating, thick or copious secretions, and a full pulse. Deficient conditions tend to have no tongue coating, no, dry or minute skin exudate, and a thin or weak pulse. Is the overall pattern Hot or Cold? Hot patterns tend to have a red tongue, warm ears, and rapid pulse. Cold patterns commonly have a pale tongue, cool ears, and a slow pulse. Is the overall pattern Damp or Dry? Damp patterns appear with a moist tongue, greasy or oozing skin, and a slippery pulse. Dry patterns more commonly present with dry tongue, dry hair, dry skin and skin lesions, and a thin or rough pulse.
References/Suggested Readings
Preliminary Study: Transposition of Meridians and Acupoints from Canine and Equine to the
Atlantic Bottlenose Dolphin

Connie L. Clemons-Chevis, DVM, CVA, CVCH, CVT
Alternative Medicine for Pets
400 Drinkwater Rd
Bay St. Louis, MS 39520

Traditional Chinese Veterinary Medicine has been used for thousands of years in China and is being incorporated more frequently into Western Medicine. Most of the acupoints and meridian lines used in Western medicine are transposed from humans. Acupuncture has been successfully used in many species and should be a beneficial therapy in marine mammals. Acupuncture charts in other species have been developed by transposition from human charts. In addition, as the knowledge and practice of acupuncture increased acupuncture charts were developed for canine and equine species. (1,2) At this time, there have not been any meridians or acupuncture points mapped out on an Atlantic bottlenose dolphin (*Tursiops truncatus*). There are no charts available to indicate where acupuncture points on Atlantic bottlenose dolphins would be located. This case study was the first step towards trying to identify and make charts showing where acupoints could be located on a dolphin. This could serve as a means to start using acupuncture into the marine mammal field. Development of an acupuncture chart in a dolphin will be rudimentary for now. Anatomical information on Atlantic Bottlenose dolphin is minimal and very elementary when compared to what is available for dogs and horses. The information developed by this case study is meant to be a stepping stone to allow marine mammal veterinarians to start using acupuncture in their practice. As our knowledge increases, the points and indications can be expounded upon.

Dolphin anatomy is very different from dogs and horses with the main difference being that the only distal limbs are the front flippers. The pelvic limbs are replaced with large caudal structures called “flukes”. If there are any acupoints on the rear then they would have to be located around blood vessels and nerves on the flukes. There are vestigial remnants of pelvic bones which are located caudal to genital slits. Dolphins have seven cervical vertebrae and fusion of two or more cervical vertebrae is common. The last one to two ribs are often not attached to the vertebrae and many times are lost during skeleton preparation. (3) Dolphins have more phalanges than any other mammals and can have a maximum of nine. (3)
One phase of the study was to plot acupoints by transposing points from other species to dolphin anatomy. Two sources were used for the acupoints plotting. The first were drawings made from dolphin skeleton pictures and radiographs (4). The second were radiographs taken of an Atlantic Bottlenose dolphin cadaver. Descriptions and charts of canine and equine points provided by Chi Institute were used as the acupoints references (1, 5, and 6).

The second phase of this study was to try to locate points on a live dolphin. In humans, acupoints can be located by a phenomenon of lower galvanic skin resistance (LSR). (2) MicroCare makes a dual-purpose handheld battery operated device which provides acupoint location as well as electrical microcurrent therapy. (7) When the acupoint detector is turned on it makes a high frequency sound. When applied to the skin over an acupoint, the sound changes in frequency or tone. The final part of this study was to use an acupoint detector on a dolphin and see if this would help in the location of the acupoints.

Acupoints on several meridians were plotted on the anatomy drawings, radiographs, and pictures. Explanations are given on the reasoning behind the placement of the acupoints. There are two anatomy drawings, 6 radiographs and 4 live dolphin photos.

Figures 1 and 2 are drawings made from pictures of a dolphin skeleton. Figure 1 shows the plotted points for BL meridian. Figure 2 illustrates the plotted points for acupoints on the right lateral front flipper. SI 3 is plotted proximal to the metacarpophalangeal joint on the lateral side of the 5th metacarpal. SI 8 is on the caudolateral side of the elbow. This point may be more medial in reality. TH 3 is plotted on the lateral flipper between the 4th and 5th metacarpals. This appears to be close to the widest part of the flipper. TH 5 is plotted above the carpus on the craniolateral aspect of the front flipper between the radius and ulna. TH 10 is plotted just caudal to SI 8 on the lateral surface of the flipper. LI 11 is plotted on the caudolateral aspect of the elbow joint.
Figure 1 Plotted Bladder acupuncture points on a left lateral skeleton drawing of the cervical to lumbar region of a bottlenose dolphin (*Tursiops truncatus*)

Figure 2 Plotted Acupuncture Points on a Skeleton Drawing of a Right Lateral Flipper of an Atlantic Bottlenose Dolphin (*Tursiops Truncatus*)
Radiograph 1 is a dorsal ventral view of the head. The cetacean maxilla is very different than other species in that cetacean skull is said to have “telescoped”. In other words the bones which form the rostrum including the maxilla have elongated and overlapped producing a shorter braincase. The result of this is that the external nares are positioned dorsally and almost centrally in the skull. The nasal cavity is oriented obliquely vertically then opens dorsally in one opening called the blowhole.(8) For this reason, LI 20 appears to be on top of the head which is where the blowhole is located. When using the acupoint finder on the melon of the dolphin a very loud sound was emitted on the dorsal midline where the melon meets the snout. This was the reasoning for labeling Shan gen in that location. SI 19 was plotted in the area of the ears. TH 21, GB 2 would probably be located close to this area also. GV 20 was plotted as located on the dorsal midline on a line drawn from one ear to the next.
Radiograph 2 is a lateral view of the head, cervical and cranial thorax. C1 and C2 are fused in the dolphin. GB 20 was plotted as being caudal to the occipital bone and cranial to C1/C2. TH 16 and SI16 were plotted were the brachiocephalicus mm is thought to be located. It may be possible that these points are lower than what is pictured. Further research will be needed on the anatomy. LI 18 was an extension of the lower mandible to an area of the jugular vein. BL 1-16 were plotted using the canine and equine descriptions.

Radiograph 3 was a dorsal ventral view of the cranial thorax. BL points were plotted using both the canine and equine descriptions. The equine descriptions use the intercostal space as a landmark instead of the dorsal spinous processes. GV 16 was plotted between the right and left GB 20, at the middle of the atlantooccipital joint. GV 14 was plotted on the dorsal midline between C7-T1. GB 20 is plotted between the occipital bone and C1/C2. TH 14 is plotted caudal to the acromion. LI 15 is plotted cranial to the acromion.
Radiograph 3 Dorsoventral Radiograph of the Cervical and Cranial Thoracic Region of an Atlantic Bottlenose Dolphin (*Tursiops Truncatus*) With Plotted Acupuncture Points.

Radiograph 4 is a lateral view of the caudal thorax. The bladder points were plotted by counting the ribs and vertebral spaces cranially starting with BL 21 being at T13\(^{th}\)–L1 vertebral space. BL 46-53 were plotted as being 3 cun (3 fingers) from BL 17-24. GB 25 and LIV 13 were plotted using the canine acupoints.
Radiograph 4 Dorsoventral Radiograph of Caudal Abdomen and Peduncle of an Atlantic Bottlenose Dolphin with Plotted Acupuncture Points.

Radiograph 5 is a dorsal ventral view of the caudal lumbar area. The location for Bai Hui was based on the location of the pelvic limbs with the idea that the vertebrae closest to that area would be the lumbosacral junction. Bai Hui is plotted on the dorsal midline at the level of the cranial edge of the vestigial pelvic bone. GV3 and GV4 based on the location of Bai Hui. BL 26 is plotted 3 cun (3 fingers) lateral to Bai Hui.
Radiograph 5 Left Lateral Radiograph of Caudal Thorax and Lumbar Region of an Atlantic Bottle-nose Dolphin (*Tursiops truncatus*) with Plotted Acupuncture Points.

Radiograph 6 is a DV of the front flippers. P1 is located cranially. LU 7 and LU9 were plotted on the radius. LI 4 was plotted between metacarpals 1 and 2 as in a cat. It is possible the point may be between M3 and M4.
Three scans using the MicroCare acupoint finder were done on a live dolphin. The dolphin was a young male Atlantic Bottlenose Dolphin, *Tursiop truncatus*, in rehabilitation at the Institute for Marine Mammal Studies in Gulfport, MS., cared for according to the principles outlined in the NMFS Marine Mammal Stranding Agreement. Two attempts were with the dolphin being held in the water. Since only the dorsal back was accessible, efforts were concentrated on finding the Bladder meridian. When the probe was placed on the dolphin skin the sound made by the acupoint finder was much higher than when touching human skin. The sound changes when encountering an acupoint were very subtle and not as loud as on humans. It almost seemed like the tone became lower instead of higher which is the opposite of humans. Zinc oxide was applied at the locations of sound changes using cotton tipped applicator. The third opportunity arose when the dolphin was removed from the water for radiographs and endoscopy. While the dolphin was out of the water as many points as possible were detected with the handheld acupoint finder, marked with zinc oxide and pictures were taken. With practice the practitioner was able to start feeling small indentations on the back where the acupoints of Bladder meridian are thought to be. The Bladder meridian appears to be 3 cun (3 fingers) lateral to the dorsal midline. There was a larger indentation at a point presumed to be BL 21. This animal was thought to have stranded with a gastrointestinal inflammation.
The photographs taken of the scanned dolphin were reviewed and points were designated based on the plotted points on anatomy charts and radiographs. There are four photos in this report: 1) a photo of points detected on the dorsal surface of the dolphin. 2) Another photo of points detected on the dorsal surface of the dolphin. 3) A photo of points detected on the lateral surface of the front flipper. Live dolphin photo. 4) A photo of points detected on the medial surface of the front flipper. The dolphin’s head is always to the right side of the picture. In summary, this study is an initial attempt to identify acupoints on an Atlantic Bottlenose dolphin, *Tursiop truncatus*. There are many points which appear to correlate with the points found in other species. The handheld acupoint detector did seem to be useful in locating acupoints and further work will be done using other types of detectors. More work needs to be done to verify these points and to see if the indications found in other species transpose to dolphins.

A list of the location of all the points is provided. The distance between the wrist and elbow is 12 cun in humans, 12 cun between the center of the elbow and the center of the carpus in a horse and 12 cun between the center of the elbow to the area just proximal to the carpus in a dog. The distance between elbow and the carpus on the flipper of this dolphin was divided into 12 and was approximately equal to one finger width of the PI. The points located with the acupoint finder on the Bladder meridian were approximately 3 fingers from the dorsal midline. Base on the measurement of the flipper, the points on the list were described using equine descriptions which have 3 cun from the dorsal midline as the location of the points.

Comment: Measurements done on multiple dolphins since this study have indicated that the most accurate place to determine a cun length is to use the distance from the Xiphoid to the umbilicus. This distance is 8 cun which in most of the dolphins studied seem to indicate a cun is approximately 1.5 to 3 fingers in width (female investigators). This would indicate that the Bladder points would be better described using the canine descriptions of 1.5 cun from the dorsal midline.
Photograph 1 Photograph of the Right Side of a Live Atlantic Bottlenose Dolphin. The White Spots are Zinc Oxide Ointment that was Applied when Changes in Tone were Noted Using the Microcare Acupoints Finder. Names and Numbers were Assigned to These Points Based on the Radiographs and Chi Institute Canine and Equine Charts.
Photograph 2 Right Lateral Dorsoventral Photograph of the Midsection of a Live Atlantic Bottlenose Dolphin. White Spots with Black Circles are the Areas where Zinc Oxide Was Applied When Changes in the Tone were Noted Using the Microcare Acupoints Finder. Names and Numbers were Assigned to these Points Based on the Radiographs and Chi Institute Canine and Equine Charts.
Photograph 3 Photograph of the Dorsal Surface of The Right Flipper of a Live Atlantic Bottlenose Dolphin. The White Spots Are Zinc Oxide Ointment that was Applied when Changes In Tone were Noted Using the Microcare Acupoints Finder. Names and Numbers were Assigned to these Points Based on the Radiographs and Chi Institute Canine and Equine Charts.
Photograph 4 Photograph of the Ventral Surface of the Right Flipper of a Live Atlantic Bottlenose Dolphin. The White Spots are Zinc Oxide Ointment that was Applied when Changes in Tone were Noted Using the Microcare Acupoints Finder. Names and Numbers were Assigned to these Points Based on the Radiographs and Chi Institute Canine and Equine Charts.

Location of Acupoints Plotted in this Study (Based on 1 cun being equal to one finger width)

- **LU 7**: Proximal to the styloid process of the radius.
- **LU 9**: On the medial aspect of the radiocarpal joint.
- **LI 4**: Between 2nd and 3rd metacarpal on the dorsal front flipper at the midpoint of the 3rd metacarpal.
- **LI 11**: At the cranial end of the cubital crease. Most cranial aspect of the shoulder joint.
- **LI 18**: On a line extended from the ventral mandible to an area just above the jugular groove.
- **LI 15**: Cranial and ventral to the acromion of the shoulder.
BL 2: Point dorsal and lateral to the medial canthus
BL 10: 3 cun lateral to the dorsal midline at the level of 1-C2.
BL 11: 3 cun lateral to the dorsal midline at the level of the 2rd intercostal space
BL 12(41): 3 cun lateral to the dorsal midline at the level of 3rd intercostal space
(3 cun lateral to BL 12).
BL 13(42): 3 cun lateral to the dorsal midline at the level of 4th intercostal space
(3 cun lateral to BL 13).
BL 14(43): 3 cun lateral to the dorsal midline at the level of 5th intercostal space
(3 cun lateral to BL 14).
BL 15(44): 3 cun lateral to the dorsal midline at the level of 6th intercostal space
(3 cun lateral to BL 15).
BL 16(45): 3 cun lateral to the dorsal midline at the level of 7th thoracic Intercostal space.
(3 cun lateral to BL 16).
BL 17 (46): 3 cun lateral to the dorsal midline at the level of 8th thoracic intercostal
space. (3 cun lateral to BL 17).
BL 18(47): 3 cun lateral to the dorsal midline at the level of 10th thoracic intercostal
space. (3 cun lateral to BL 18).
BL 19(48): 3 cun lateral to the dorsal midline at the level of 11th thoracic intercostal
space. (3 cun lateral to BL 19)
BL 20(49): 3 cun lateral to the dorsal midline at the level of 12th thoracic intercostal
space. (3 cun lateral to BL 20).
BL 21(50): 3 cun lateral to the dorsal midline at the level of 13th thoracic intercostal
space. (3 cun lateral to BL 21).
BL 22(51): 3 cun lateral to the dorsal midline at the level of 1st lumbar intercostal space.
(3 cun lateral to BL 22).
BL 23(52): 3 cun lateral to the dorsal midline at the level of 2nd lumbar intercostal space;
approximately at the perpendicular midline of the dorsal fin. (3 cun lateral to BL 23).
BL 24(53): 3 cun lateral to the dorsal midline at the level of 4th lumbar intercostal space.
(3 cun lateral to BL 24).
Bai Hui: At the dorsal midline even with vestigial pelvic bone.
GB 1: Caudoventral to the lateral canthus of the eye
GB 20: Just caudal to the occipital condyle. Between the occipital bone and C1.
GB 25: On the lateral side of the abdomen on the lower border of the free end of the 13th rib.
TH 3: On the dorsal surface of the front flipper in the interosseous space between the radius and ulna.
TH 5: 3 cun above the carpus on the craniolateral aspect of the front flipper between the radius and ulna
TH 14: Caudal and distal to the acromion.
TH 16: On the caudal border of the brachiocephalicus m level with the intervertebral space of C1 and C2.
LIV 13: On the lateral side of the body just below the free end of the 12th rib.
SI 3: Proximal to the metacarpophalangeal joint on the lateral side of the 5th metacarpal.
SI 8: On the most caudolateral aspect of the elbow joint. Caudal to TH 14.
SI 16: On the dorsal border of the brachiocephalicus m. at the level of the second cervical vertebral space (C2-C3).
GV 3: On the dorsal midline 2 vertebral space in front of Bai Hui.
GV 4: On the dorsal midline between the dorsal spinous processes of the 2nd and 3rd lumbar vertebrae.
GV 14: On the dorsal midline between C7-T1.
GV 16: Between the right and left GB 20, at the middle of the atlantooccipital joint.
GV 20: On the dorsal midline on a line drawn level with the ears.
Shan gen: Located at the frontal aspect of the melon where it meets the beak or snout.
References:


4. Hillman, D.J., R. Wilhite. Anatomy Department, LSU College of Veterinary Medicine, Baton Rouge, LA.


*The author would like to acknowledge the Institute for Marine Mammal Studies, Gulfport, MS for providing the dolphin studied in this report and the personnel.*
The equine Lung is an incredibly resilient organ subjected to a barrage of insults throughout life. Foal pneumonias, bedding on dusty wood shavings, being ridden in dusty indoor arenas, fed hay with molds and dust, chronic stress of aging to unheard of years. Yet despite these recurrent insults the equine Lung is amenable and thrives with a multi-tiered approach of TCVM, acupuncture and herbs. Like unpeeling the layers of an onion, a multi-tiered approach to therapy is critical and can lead to resolution. From Lung Heat & Phlegm Accumulation to Kidney not grasping Lung Qi and all disharmonies in between the correct herbal formulas and collection of acupuncture point stimulation can prove beneficial to long term health and Lung harmony. This has held true in theory, in practice and in science.

LUNG HEAT & PHLEGM ACCUMULATION:

Lung Heat and Phlegm Accumulation can arise from many insults including pneumonia, foal pneumonia, aspiration pneumonia, etc. Whatever the cause, the symptoms remain the same: coughing, phlegm discharge, difficulty with inhalation and/or exhalation, exercise intolerance, and heave lines on the lateral abdomen. Wheezing and broncho-constriction are heard on auscultation. In the event of bacterial infections, the extreme coldness of the appropriate antibiotic is of course indicated. Once the sterilization of the lung parenchyma has been accomplished the Lung Heat disharmony may innately resolve or if not resolved may become a more chronic condition of Lung Heat. The treatment principles include cooling Lung Heat, resolving Phlegm, harmonizing Lung Qi and stopping cough. See the following tables for recommended acupuncture points and herbal formula.
Table 1 Acupuncture Points for Lung Heat & Phlegm Accumulation:

<table>
<thead>
<tr>
<th>Acupuncture Point</th>
<th>TCVM Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung 1</td>
<td>Eliminates Heat</td>
</tr>
<tr>
<td>Lung 7</td>
<td>Disperses Pulmonary Qi</td>
</tr>
<tr>
<td>Lung 11</td>
<td>Eliminates Pulmonary Heat</td>
</tr>
<tr>
<td>Bladder 13</td>
<td>Dispels Heat &amp; Promotes Lung Function in Dispersing Qi</td>
</tr>
<tr>
<td>Governing Vessel 14</td>
<td>Dispels Wind-Heat</td>
</tr>
<tr>
<td>Bladder 20</td>
<td>Benefits The T&amp;T Functions of Spleen</td>
</tr>
<tr>
<td>Stomach 40</td>
<td>Transforms Phlegm &amp; Damp</td>
</tr>
<tr>
<td>Large Intestine 4</td>
<td>Dispels Heat</td>
</tr>
<tr>
<td>Large Intestine 11</td>
<td>Dispels &amp; Transforms Damp-Heat</td>
</tr>
</tbody>
</table>

Table 2 Herbal formula for Lung Heat & Phlegm Accumulation – Bei Mu San/Fritillary Pulvis:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Chinese Theory</th>
<th>Scientific Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bei Mu/Fritillary Bulb</td>
<td>Moistens Lungs, transforms Phlegm, &amp; stops cough</td>
<td>Steroidal Alkaloids, antitussive, inhibitory effects on airway inflammation by suppression of Th2 cytokines (IL-4, IL-5 and IL-13), IgE, histamine production, reduction eosinophilic accumulation and increase of interferon-gamma 1-3</td>
</tr>
<tr>
<td>Zhi Zi/Gardenia Fruit</td>
<td>Clears heat &amp; drains fire especially in the Lungs</td>
<td>Anti-inflammatory, antioxidant, anxiolytic &amp; immunosuppressive 4-9</td>
</tr>
<tr>
<td>Bai Bu/Stemona Seed</td>
<td>Moistens Lungs &amp; stops cough</td>
<td>Antibacterial, antitussive, &amp; spasmyolytic effect on tracheal smooth muscle 10-14</td>
</tr>
<tr>
<td>Xing Ren/Platycodon</td>
<td>Regulates Lung Qi &amp; directs Lung Qi</td>
<td>Anti-inflammatory and analgesic effects probably by suppression of cyclo-oxygenase-2 and inducible nitric oxide synthase expressions. 15</td>
</tr>
<tr>
<td>Zi Wan/Aster Root</td>
<td>Relieves cough &amp; expels Phlegm</td>
<td>Antioxidant &amp; expectorant properties 16-17</td>
</tr>
<tr>
<td>Jie Geng/Platycodon</td>
<td>Facilitates movement of Lung Qi</td>
<td>Anti-inflammatory, immunomodulation, antioxidant, &amp; increase airway mucin release 18-31</td>
</tr>
<tr>
<td>Niu Bang Zi/Arctium Fruit</td>
<td>Disperses wind-heat &amp; benefits throat</td>
<td>Anti-inflammatory, anti-allergic effects, &amp; antitussive 32-46</td>
</tr>
<tr>
<td>Gan Cao/Licorice Root</td>
<td>Harmonizes the actions of the other herbs</td>
<td>Anti-inflammatory, antibacterial, antioxidant, &amp; inhibits histamine receptor signaling, trachea spasm relieving 35-46</td>
</tr>
</tbody>
</table>
Bei mu san is administered until the signs of Lung heat have diminished and the phlegm has resolved.

**Lung Yin Deficiency:** Dryness is the worst enemy of the Lung. Chronicity of a Lung Heat disharmony can affect the Lung Yin. When Yang has been in excess for long term, and in many horses this disharmony can be present for years without resolution, the Yang will deplete the Yin of the Lung and at times the body. The second deeper layer of the onion is Lung Yin Deficiency. So once the excess heat is resolved the appearance of Lung Yin Deficiency can be identified. The clinical appearance is still of relative heat, but not as severe. Signs such as heat intolerance, dry cough, and difficulty with inhalation and/or exhalation exist but not as severe. Milder broncho-constriction, without wheezing or severe abnormal sounds, is asuculated. Tongue is red with minimal coating and the pulse is often thready and rapid.

Acupuncture point prescription for Lung Yin Deficiency include points to address the treatment principles to tonify Lung Yin, tonify Kidney Yin, eliminate Heat, transform Phlegm, stop cough, and harmonize Lung. See the following tables for recommended acupuncture points and herbal formula.

Table 3 Acupuncture Points for Lung Yin Deficiency:

<table>
<thead>
<tr>
<th>Acupuncture Point</th>
<th>TCVM Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung 1</td>
<td>Eliminates Heat</td>
</tr>
<tr>
<td>Lung 7</td>
<td>Disperses pulmonary Qi</td>
</tr>
<tr>
<td>Lung 11</td>
<td>Eliminates pulmonary Heat</td>
</tr>
<tr>
<td>Kidney 3</td>
<td>Tonifies Kidneys</td>
</tr>
<tr>
<td>Kidney 1</td>
<td>Tonifies Yin &amp; subdues Empty Heat</td>
</tr>
<tr>
<td>Bladder 13</td>
<td>Dispels Heat &amp; promotes Lung function in dispersing Qi</td>
</tr>
<tr>
<td>Bladder 23</td>
<td>Association point for Kidney</td>
</tr>
<tr>
<td>Governing vessel 14</td>
<td>Dispels Wind-Heat</td>
</tr>
</tbody>
</table>
Table 4 Herbal Formula for Lung Yin Deficiency—Bai He Gu Jin San/Lilly Bulb

**Powder to Preserve the Metal:**

<table>
<thead>
<tr>
<th>Pin Yin/Common Name</th>
<th>Tcvm Action</th>
<th>Scientific Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bai He/ Lily Bulb</td>
<td>Moistens &amp; nourishes dryness in the Lungs</td>
<td>Steroidal saponins 47-48</td>
</tr>
<tr>
<td>Shu Di Huang/Prepared Rehmannia</td>
<td>Liver &amp; Kidney Yin tonic</td>
<td>Increase glucocorticoid receptor binding, antioxidant, enhanced bone marrow production of hematopoietic cells, enhances blood flow 49-54</td>
</tr>
<tr>
<td>Sheng Di Huang/Raw Rehmannia</td>
<td>Enriches Yin, cools Blood</td>
<td>Reticuloendothelial system potentiating activity, enhanced bone marrow production of hematopoietic cells 49,55</td>
</tr>
<tr>
<td>Mai Men Dong/Ophiopogon</td>
<td>Yin tonic for the upper burner</td>
<td>Anti-inflammatory activity 56</td>
</tr>
<tr>
<td>Bai Shao Yao/White Peony Root</td>
<td>Nourish Blood &amp; supports Yin</td>
<td>Antiallergic, antioxidant, &amp; improves microcirculation 57-59</td>
</tr>
<tr>
<td>Xuan Shen/Scrophularia</td>
<td>Clears Heat from Deficiency</td>
<td>Anti-inflammatory, Antioxidant 60-61</td>
</tr>
<tr>
<td>Zhi Bei Mu/Fritillaria Bulb</td>
<td>Moistens Lungs, transforms Phlegm, &amp; stops cough</td>
<td>Steroidal Alkaloids &amp; antitussive qualities 1-3</td>
</tr>
<tr>
<td>Dang Gui/Angelica Root</td>
<td>Nourish Blood &amp; supports Yin</td>
<td>Anti-inflammatory, immunomodulation, &amp; antioxidant 62-67</td>
</tr>
<tr>
<td>Jie Geng/Platycodon Root</td>
<td>Facilitates movement of Lung Qi</td>
<td>Anti-inflammatory, immunomodulation, antioxidant, &amp; increase airway mucin release 18-31</td>
</tr>
<tr>
<td>Gan Cao/Licorice Root</td>
<td>Harmonizes the actions of the other herbs</td>
<td>Anti-inflammatory, antibacterial, antioxidant, &amp; inhibits histamine receptor signaling, trachea spasm relieving 35-46</td>
</tr>
</tbody>
</table>

**Lung Qi Deficiency:** Chronicity of Lung disharmonies of any origin, Heat or Yin deficiency, lead to depletion of Lung Qi and result in all the accompanying signs; such as sensitivity to molds and
dusts leading to recurrent flare-ups of Lung Heat signs if left untreated. In addition signs of Qi Deficiency; weariness, weakness, lack of energy, and chronic weak cough are also present. The tongue can be pale and the pulse may be weak. See the following tables for recommended acupuncture points and herbal formula.

Table 5 Acupuncture Points for Lung Qi Deficiency:

<table>
<thead>
<tr>
<th>Acupuncture Point</th>
<th>TCVM Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bladder 13</td>
<td>Dispels Heat &amp; promotes Lung function in dispersing Qi</td>
</tr>
<tr>
<td>Bladder 21</td>
<td>Association point for Stomach</td>
</tr>
<tr>
<td>Stomach 36</td>
<td>Benefits ST functions</td>
</tr>
<tr>
<td>Conception Vessel 17</td>
<td>Sea of Qi point</td>
</tr>
<tr>
<td>Kidney 3</td>
<td>Tonifies Kidneys</td>
</tr>
<tr>
<td>Kidney 1</td>
<td>Tonifies Yin &amp; subdues Empty Heat</td>
</tr>
<tr>
<td>Bladder 23</td>
<td>Association point for Kidney, tonifies Kidney</td>
</tr>
<tr>
<td>Lung 7</td>
<td>Disperses pulmonary Qi</td>
</tr>
<tr>
<td>Lung 9</td>
<td>Influential point for Qi Def, source point, &amp; tonification point</td>
</tr>
<tr>
<td>Pin Yin/Common Name</td>
<td>TCVM Action</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Du Hou/Pubescent Angelica Root</td>
<td>Dispel Wind–Cold from the exterior</td>
</tr>
<tr>
<td>Qiang Hu/Notopterygium Root</td>
<td>Dispel Wind–Cold from the exterior</td>
</tr>
<tr>
<td>Chuan Xiong/Ligusticum</td>
<td>Release to the exterior, moves Blood &amp; dispels Wind</td>
</tr>
<tr>
<td>Chai Hu/Bupleurum Root</td>
<td>Release pathogenic influences</td>
</tr>
<tr>
<td>Bo He/Mentha</td>
<td>Release pathogenic influences</td>
</tr>
<tr>
<td>Qian Hu/Peucedanum Root</td>
<td>Transforms Phlegm and strengthen Spleen</td>
</tr>
<tr>
<td>Jie Geng/Platycodon</td>
<td>Facilitates movement of Lung Qi</td>
</tr>
<tr>
<td>Zhi Qiao/Bitter Orange</td>
<td>Regulates flow of Qi to the chest</td>
</tr>
<tr>
<td>Fu Ling/Poria</td>
<td>Transforms Phlegm and strengthens Spleen</td>
</tr>
<tr>
<td>Sheng Jiang/Fresh Ginger</td>
<td>Release to the exterior</td>
</tr>
<tr>
<td>Dang Shen/Codonopsis</td>
<td>Strengthens Qi</td>
</tr>
<tr>
<td>Gan Cao/Licorice Root</td>
<td>Harmonizes the actions of the other herbs</td>
</tr>
</tbody>
</table>
Kidney Not Grasping Lung Qi: Normal breathing involves the coordinated functions of Lungs and Kidneys. The Lungs take in oxygen via respiration and is said to have a descending function. This descending function of the Lungs is assisted by the Kidney, which is said to grasp Lung Qi and pull it backward i.e. spreading oxygen through out the body. Any disharmony of Lung or Kidney will disrupt these normal functions.

Chronic Lung disharmonies are a long-term stress, which with time depletes Kidney Qi. This depletion of Kidney Qi can hinder the grasping of Lung Qi and therefore the descending function of Lung. On the other hand, the Kidney is considered the flame of life. As time progresses Kidney Qi depletion occurs. In older Kidney Qi deficient horses that normal descending process has difficulty and as such reflects signs of COPD. Chronic cough, heave line on lateral abdomen, more difficulty in one phase of respiration either inhalation or exhalation, lethargy, unthrifty, slow moving, hindlimb edema, poor hair coat are all signs seen clinically.

Treatment is focused around tonifying Qi especially Kidney Qi, maximizing the Lung descending function, clearing Heat, transforming Phlegm, & stopping cough. See the following tables for recommended acupuncture points and herbal formula.

Table 7 Acupuncture Points for Kidney Not Grasping Lung Qi:

<table>
<thead>
<tr>
<th>Acupuncture Point</th>
<th>TCVM Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kidney 1</td>
<td>Tonifies Yin &amp; subdues Empty-Heat</td>
</tr>
<tr>
<td>Kidney 3</td>
<td>Tonifies Kidneys</td>
</tr>
<tr>
<td>Bladder 23</td>
<td>Association point for Kidney, tonifies Kidney</td>
</tr>
<tr>
<td>Bladder 13</td>
<td>Dispels Heat &amp; promotes Lung function in dispersing Qi</td>
</tr>
<tr>
<td>Lung 1</td>
<td>Eliminates Heat</td>
</tr>
<tr>
<td>Lung 7</td>
<td>Disperses pulmonary Qi</td>
</tr>
<tr>
<td>Lung 11</td>
<td>Eliminates pulmonary Heat</td>
</tr>
<tr>
<td>Lung 9</td>
<td>Influential point for Qi def, source point, &amp; tonification point</td>
</tr>
<tr>
<td>Conception Vessel 17</td>
<td>Sea of Qi point</td>
</tr>
</tbody>
</table>
Table 8 Herbal Formula for Kidney Not Grasping Lung Qi – Ren Shen Ge Jie San/Ginseng and Gecko Powder:

<table>
<thead>
<tr>
<th>Pin Yin/Common Name</th>
<th>TCVM Action</th>
<th>Scientific Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ge Jie/Gecko</td>
<td>Tonify the Kidneys ability to grasp Lung Qi</td>
<td>None known to date</td>
</tr>
<tr>
<td>Ren Shen/Ginseng</td>
<td>Tonify Kidney, Lung &amp; Spleen Qi</td>
<td>Immunologic activities $^{84-85}$</td>
</tr>
<tr>
<td>Fu Ling/Poria</td>
<td>Benefits Spleen by draining Damp</td>
<td>Stimulates macrophages to express iNOS gene through the activation of NF-kappaB/Rel $^{80}$</td>
</tr>
<tr>
<td>Sang Bai Pi/Bark of Mulberry Root</td>
<td>Regulates Lung Qi &amp; directs Lung Qi downward</td>
<td>Immunomodulating, cathartic, analgesic, diuretic, antitussive, antiedema, sedative, anticonvulsant, and hypotensive actions in mice, rats, guinea pigs and dogs $^{86-87}$</td>
</tr>
<tr>
<td>Xing Ren/Apricot Seed</td>
<td>Regulates Lung Qi &amp; directs Lung Qi downward</td>
<td>Antioxidant, anti-inflammatory and analgesic effects probably by suppression of cyclooxygenase-2 and inducible nitric oxide synthase expressions $^{15}$</td>
</tr>
<tr>
<td>Zhi Bei Mu/Fritillaria Bulb</td>
<td>Clears Heat, transforms Phlegm &amp; moistens Lungs</td>
<td>Steroidal Alkaloids &amp; antitussive qualities $^{1-3}$</td>
</tr>
<tr>
<td>Zhi Mu/Anemarrhenia</td>
<td>Clears Heat &amp; nourishes Kidneys</td>
<td>Inhibitory effects on airway inflammation by suppression of Th2 cytokines (IL-4, IL-5 and IL-13), IgE, histamine production, reduction eosinophilic accumulation and increase of interferon-gamma production $^{88}$</td>
</tr>
<tr>
<td>Zhi Gan Cao/Honey Fried Licorice</td>
<td>Harmonizing other herbs &amp; tonifies source qi</td>
<td>Anti-inflammatory, antibacterial, antioxidant, &amp; inhibits histamine receptor signaling, trachea spasm relieving $^{35-46}$</td>
</tr>
</tbody>
</table>
References


Food Therapy in Oriental Medicine Treatment of Cancer  
Keum Hwa Choi, DVM, PhD, CVA, OMD, LAc, Assistant Professor.  
Diplomate in Oriental Medicine, Acupuncture and Herbology (NCCAOM),  
Complementary & Alternative Medicine, Veterinary Clinical Sciences  
College of Veterinary Medicine, University of Minnesota  
1352 Boyd Avenue, St. Paul, Minnesota 55108.

OVERVIEW

Food therapy in Oriental Medicine is a fundamental medical discipline to maintain homeostasis and recover balance from imbalance status. Food therapy has been used as prophylactic and therapeutic purposes in Oriental Medicine. The concept of food in Oriental Medicine is different from that of nutritional science in Western Medicine to a certain extent. Food therapy is practiced based on fundamental Oriental Medicine theories including Yin/Yang theory, five-element theory, meridian theory, six pathogen theory, Zang Fu theory, six meridian theory, four substances theory, and constitutional theory. Food is regarded as a whole and is classified based on five tastes, four energy categories, and meridian tropism. These criteria are as important as nutritional facts in Oriental Medicine food therapy. Nutritional science in Western medicine emphasizes the components such as protein, carbohydrate, fat, minerals or vitamins. In addition to nutritional facts, Oriental Medicine food therapy also emphasizes food Qi. Therefore, growing condition, soil condition, weather condition, seasonal changes, and harvest and storage condition as well as cooking methods are all considered for evaluating the food for medicine. Above all, individual pattern differentiation should be addressed for practicing appropriate Oriental Medicine food therapy.

Food is a substantial medicine that we generate the least adverse effects to. Therefore, the selection of appropriate food items for humans and pets are critical for keeping our inner balance. A variety of commercial dog food is available on the market such as kibble, wet food, or frozen or frozen-dry form, dehydrated, and uncooked food form. In the United States, dog food should meet the standard guidelines provided by the Association of American Feed Control officials. Most commercial foods show good balance in nutritional facts. However, the other criteria such as the source of ingredients, manufacturing process, or harvest/cultivating conditions are not greatly considered. Lately, many pet owners are seeking for natural food and pet food companies have started to consider food as a whole.
Current research indicates that certain foods such as high energy, high fat, and processed diets can impact the susceptibility to certain types of cancer.\textsuperscript{3,7} In general, western nutritional science suggests vegetables, fruits, legumes and wholegrain foods as anticancer food.\textsuperscript{10} Dietary polyphenols in most vegetables has been investigated as anticancer agents and genistein and isoflavone isolated from soy bean have shown anticancer activity to various cancer cell lines.\textsuperscript{1}

Food therapy in Oriental Medicine is the prime medical realm in conjunction with others including acupuncture, herbal therapy, Tui-na, and physical and mental practice. Oriental Medicine food therapy is more customized based on an individual’s pattern differentiation. Diet is extremely critical for preventing, inducing, or treating cancer in Oriental Medicine food therapy. The large body of research has provided scientific evidence of the effect of food for cancer. As seen, the word character, Amm (암), or Liu (癌), which is similar to cancer in modern oncology indicate that mouth (ㅁ) or food could be the prime source whether preventing or generating a tumor. Inappropriate diet is the leading cause of cancer in the ancient Oriental Medicine concept. Recently, food therapy has been a growing interest for cancer prevention and therapy in Western nutritional science. Despite tremendous research on food as a medicine, many controversial or contradictory data creates confusion. For instance, beta carotene, which is known as a detoxifying agent for carcinogens, could develop lung cancer compared to the placebo group in male smokers in Finland (1998). Why do scientists frequently obtain contradictory scientific data? There would be various reasons and I would like to address that one of these reasons is the lack of individual pattern differentiation theory in Western Medicine.

In this lecture, I will discuss anticancer food based on the five-element theory and briefly introduce the Sasang Constitutional Medicine.\textsuperscript{9}

*Food therapy for cancer patients based on Five-element theory.* In Oriental Medicine, five elements including wood, fire, earth, metal and water are essential components of the universe. The five-element theory is applied to interconnect internally and externally among Zang Fu organs, tissue, sense organs and the environment. The five-element theory is also applied for categorizing the individual constitution and the route or origin of diseases. Personality and emotional response would be different from the types of elements. The selection or appropriate food items would be variable among five element types. Wood archetype would be outgoing, challenging, speedy, skillful, active, intolerant, impatient, violent, and extreme. The foods for wood would
have a sour taste and a dark green color. Examples of wood type foods are dark green vegetables, lemons, plums, mangoes, sauerkraut, wheat and barley, and sprouts. Fire archetype has qualities such as dynamism, strength and persistence, warmth, enthusiasm and creativity, aggression, impatience and impulsive behavior. Foods belonging to the fire element are of a red color and have a bitter taste. Fire type foods would be hops, radish leaves, romaine lettuce, alfalfa, dandelions, chocolate, corn and many herbs. Earth archetype would be patience, thoughtfulness, nurturing, hard work, easy going and stability. In general, the earth type has ambition, stubbornness, responsibility, and pensiveness, but may represent selfishness. Foods belonging to the earth element are mostly root, honey, apple, cherry, banana, corn, carrot, sesame oil, yam and millet, and pumpkin. Metal archetype shows rigidity, persistence, self control, independent, strength, materialistic, and determination. Metal type foods are white in color and pungent in taste such as onion, chive, coriander, parsley, radish, garlic, ginger, cayenne, peppermint, pear, clove and rice. Water archetype represents intelligence, wisdom, flexibility, softness, timid, not determined, and weak. Water type foods are salty in taste and black in color such as, kelp, seaweed, salty pickles, olives, celery, black sesame, and beans, especially black bean.

Table 1 The Five-element

<table>
<thead>
<tr>
<th>Five element</th>
<th>Wood</th>
<th>Fire</th>
<th>Earth</th>
<th>Metal</th>
<th>Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Season</td>
<td>Spring</td>
<td>Summer</td>
<td>Late Summer</td>
<td>Autumn</td>
<td>Winter</td>
</tr>
<tr>
<td>Color</td>
<td>Green</td>
<td>Red</td>
<td>Yellow</td>
<td>White</td>
<td>Black</td>
</tr>
<tr>
<td>Sense Organ</td>
<td>Eye</td>
<td>Tongue</td>
<td>Mouth</td>
<td>Nose</td>
<td>Ear</td>
</tr>
<tr>
<td>Tissue</td>
<td>Sinew</td>
<td>Vessel</td>
<td>Flesh</td>
<td>Skin</td>
<td>Bone</td>
</tr>
<tr>
<td>Emotion</td>
<td>Anger</td>
<td>Joy</td>
<td>Pensiveness</td>
<td>Sadness</td>
<td>Fear</td>
</tr>
<tr>
<td>Weather</td>
<td>Wind</td>
<td>Heat</td>
<td>Dampness</td>
<td>Dryness</td>
<td>Cold</td>
</tr>
<tr>
<td>Zang organs</td>
<td>Liver</td>
<td>Heart, pericardium</td>
<td>Spleen</td>
<td>Lung</td>
<td>Kidney</td>
</tr>
<tr>
<td>Fu organs</td>
<td>Gallbladder</td>
<td>Small Intestine</td>
<td>Stomach</td>
<td>Large Intestine</td>
<td>Bladder</td>
</tr>
</tbody>
</table>
Table 2 Selected foods based on five element theory

<table>
<thead>
<tr>
<th>Five elements</th>
<th>Fire</th>
<th>Earth</th>
<th>Metal</th>
<th>Water</th>
<th>Wood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taste</td>
<td>Bitter</td>
<td>Sweet</td>
<td>Pungent</td>
<td>Salty</td>
<td>Sour</td>
</tr>
<tr>
<td>Grains</td>
<td>Amaranth Corn</td>
<td>Millet Barley</td>
<td>Long grain Rice</td>
<td>Buckwheat</td>
<td>Oats Wheat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Short grain Rice</td>
<td></td>
<td></td>
<td>Rye Barley</td>
</tr>
<tr>
<td>Vegetables</td>
<td>Beet</td>
<td>Cabbage Carrot</td>
<td>Asparagus Broccoli</td>
<td>Kale Seaweeds</td>
<td>Green bell</td>
</tr>
<tr>
<td></td>
<td>Dandelion Root</td>
<td>Root Parsnip</td>
<td>Celery Cucumber</td>
<td>Mushrooms</td>
<td>pepper Lettuce</td>
</tr>
<tr>
<td></td>
<td>Okra</td>
<td>Rutabaga Spinach</td>
<td>Mustard Green Onion</td>
<td></td>
<td>String Bean</td>
</tr>
<tr>
<td></td>
<td>Red Bell Pepper</td>
<td></td>
<td>Radish</td>
<td></td>
<td>Zucchini</td>
</tr>
<tr>
<td></td>
<td>Scallion</td>
<td>Squash</td>
<td></td>
<td></td>
<td>Sprout</td>
</tr>
<tr>
<td></td>
<td>Tomato</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Romaine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>lettuce</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dandelion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruits</td>
<td>Cherry</td>
<td>Fig, Orange</td>
<td>Apricot Banana</td>
<td>Mulberry Pomegranate</td>
<td>Avocado</td>
</tr>
<tr>
<td></td>
<td>Persimmon</td>
<td>Papaya Pineapple</td>
<td>Pear</td>
<td>Raspberry</td>
<td>Grape, Lemon</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Strawberry</td>
<td></td>
<td>Watermelon</td>
<td>Lime Plum</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mango</td>
</tr>
<tr>
<td>Legumes</td>
<td>Red Lentil</td>
<td>Garbanzo Peas</td>
<td>Navy Soy</td>
<td>Aduki Black Kidney</td>
<td>Green Lentil</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Pinto</td>
<td>Mung Lima</td>
</tr>
<tr>
<td>Nuts/Seeds</td>
<td>Sunflower</td>
<td>Pine Nut Pumpkin</td>
<td>Almonds</td>
<td>Black Sesame Walnut</td>
<td>Brazil Cashew</td>
</tr>
<tr>
<td></td>
<td>Pistachio</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cautions</td>
<td>Chocolate</td>
<td>Meat</td>
<td>Eggs</td>
<td>Cheese</td>
<td>Soft Dairy</td>
</tr>
<tr>
<td></td>
<td>Sugar</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Sasang Constitutional Medicine (SCM). The Sasang Constitutional medicine theory was first presented by Lee Je Ma, a Korean Oriental Medical doctor in the Joseon dynasty and his theory was well documented in his book, Longevity and Life Preservation in Eastern Medicine (Dong Ui Su Se Bo Gam), in 1894.9 Recently, the theory has been paid special attention by Korean Traditional Medical practitioners, mainstream medical doctors, as well as other medical providers. Sasang Constitutional Medicine (SCM) is the most comprehensive systematized constitutional theory in the world.9 Dr. Lee Je Ma identified four Sasang constitutions including Taeyangin, Taeumin, Soyangin and Soeumin. Each constitution has its unique physiological and pathological characteristics, and treatment principles.9

The typical feature of SCM is mind-body medicine. Sasang means four constitutions including Taeyangin, Soyangin, Taeumin and Soumin.9 Each constitution has its unique personality, physiological strength and weakness, and characteristics.

Food therapy is a crucial therapeutic medical principle of SCM. Based on SCM theory, there are beneficial and harmful foods according to each constitution. In contrast to the Western nutritional science, food therapy in SCM is for regulating and balancing person’s constitution.

Studies supported the relationship between Sasang constitution and incidence of cancer or cancer types.8 At present, SCM has only been applied for human beings. Due to the lack of information for definitive criteria, theory of animal SCM is not established yet. The animal SCM would be an interesting area to be investigated for providing a prophylactic or therapeutic medical modality based on breeds or individual constitution.

What food should animals with cancer be fed? Unfortunately, there is no definitive guideline for food for cancer patients. Clinicians and pet owners have confusion with conflicting or controversial scientific data and guidelines. Many varieties of supplements are flooding the market.

Since pattern differentiation would be the fundamental principle in Oriental Medicine food therapy, identification of the patient’s pattern is the foremost step. Then, the selection of food will be followed by its pattern differentiation. However, I have provided some general guide line for cancer patients.
DR. CHOI’S TEN GENERAL GUIDELINES OF FOOD THERAPY

1) Select the food based on the constitution
2) Balanced diet in nutrients, calorie and food items. Keep ideal body mass index (BMI; 20 to 25)
3) Reduce fat, sugar, salt, hot/spicy food consumption.
4) Eat fresh and natural foods which keep food Qi.
5) Avoid processed food containing food additives, preservatives, fillers, or contaminants.
6) Add Qi tonic food: Since Qi deficiency is the fundamental physiopathogenesis of cancer in Oriental Medicine, Qi tonic food would be an essential part of food therapy.
7) Do not over eat charred food, uncooked meat.
8) Drink appropriate water to patient’s constitution and pattern differentiation.
9) Eat regularly and don’t overeat at a time.
10) Small portion with variety of food, avoid emotional stress as you dine and chew food long enough (30 to 50 chews each time).

DR. CHOI’S SEVEN RECOMMENDED GENERAL FOOD ITEMS FOR CANCER PATIENTS

1) Antioxidant (mildly restricted). Antioxidants act as an enhancer of immune defense and as a scavenger for free radical which is a natural by-product in our body inducing oxidative damage. This free radical has been known as a cancerous agent. Fruit and vegetables are a good source of antioxidants. Food containing antioxidants would be beneficial for preventing and managing cancer. Vitamin C, Vitamin E, selenium, Coenzyme Q10, or glutathione would be a good source of antioxidant.

2) Three mushrooms (mildly restricted): *Ganoderma Lucidum* (Reishi), shitake, mitake mushroom has been reported as a immune boosting food. Active ingredient of *Ganoderma lucidum* is triterpenes (ganoderic acids) which has similar molecular structure as steroid hormones. It has been used as anticancer food in Oriental medicine.5 *Grifola frondosa* (maitake mushroom) contains grifolan, a beta-glucan polysaccharide which can activate macrophages and engage the cellular mediated immunity.4 *Lentinula edodes* (Shiitake mushroom) has a (1-3) β-D-glucan as
the active compound and shows anti-tumor effects. The mushroom formula would be a potential choice for animal cancer supplement.

3). Vegetables (no restriction): Most vegetables synthesize phenol or oxygen-substituted derivatives which are, in general, for its defense mechanism. Polyphenol from vegetables has been studied as anti-carcinogens. Make a vegetable chart based on the body’s response.

4). Fruits (mildly restricted): Numerous studies have claimed the relationship with the fruit consumption and anticancer effect, and two to three servings of fruit per day was recommended. In Oriental Medicine food therapy, types of fruit are equally important as the amount of daily serving size. Since the sugar-feeds-cancer cell concept is widely accepted, sweet fruits such as honeydew, or melon would be considered its serving size and frequency. I recommend less-sweet, sour or bitter tasting fruit including blackberry, raspberry, apple, plum, prune, persimmon, cherries, grapes, tomato, etc. The National Cancer Institute discussed the possibility of substantial errors of fruit consumption and anticancer effect. In Oriental Medicine food therapy, some fruits should be carefully considered for cancer patients.

5). Legume (mildly restricted): Legumes such as beans, peas, and lentils are known to have good plant protein source and large amounts of antioxidants. Recommended types of beans would be *angularis* (azuki bean), *radiata* (mung bean), *unguiculata* (cow pea such as black eyed pea), *arietinum* (chickpea), *sativum* (pea), *max* (soybean), *culinaris* (lentil), *lunatus* (lima bean), and *vulgaris* (common bean such as pinto bean, kidney bean). There are many other kinds of beans and the selection of beans should be considered to the patient’s pattern or clinical conditions, accordingly. For example, broad beans or fava beans should be considered according to the patient’s condition because they are rich in tyramine which shows contraindication to monoamine oxidase inhibitors. In addition, raw fava beans contain vicine, isouramyl, and convicine, which could induce hemolytic anemia.

6). Seaweed (conditionally restricted): Seaweed such as kelp or Gim (nori) has been used as an anti-cancer food. Seaweed is categorized into salty in taste and has tropism to kidney. Salty food can soften or reduce hard masses. It is rich in many minerals and other special nutrients such as iodine. Cho et al² reported the antimutagenic and cancer cell growth inhibitory effects of methanol extracts from 9 kinds of seaweed including sea lettuce, chlorella, sea tangle, sea mustard, sporophyll of sea mustard, fusiforme, seaweed papulosa, purple laver and ceylon mustard.
7). Water: Water plays a prime role for transportation of nutrients as well as waste material in the body. Daily requirement of water consumption is not definitively elucidated, but the general guideline recommends 7 to 8 cups for adults. The consumption of too much water could induce cerebral edema with hyponatremia which can be fatal. Drinking appropriate amounts of water should be addressed based on one’s constitution and physical condition.
References


Comparative Reflex Zones
Andy Roesti, DVM, Private Veterinarian, Integrative holistic medicine, Manimalbalance
 Chrümgistrasse 18
 CH 3752 Wimmis, Switzerland

Sometimes it is not possible to apply an appropriate acupuncture treatment; stubborn horses, biting dogs, scratching cats, wild feedlot bulls, etc. Therefore, I try in any case the utmost harmless and less dangerous therapy; e.g. Laserpuncture onto SP 21 (“Big Yin Luo Pt”) to sedate the horse and stabilise its Yin aspect. On the other hand horses don’t like ear acupuncture (AP) and also foot and hand reflex zone massage cannot be performed. In dogs with Hip Dysplasia, Elbow Dysplasia or other indications, I apply gold and silver bar implantations only in the ears (except in othaematoma ears). The main reason is: we are far away from the locus dolendi and I can apply so called forceps implants. Forceps implants is the implantation of a pure golden bar (wire 5-8 mm long, 0,9 mm in diameter) in front of the ear and a pure silver bar (wire 5-8 mm long, 0.9 mm in diameter) behind the ear. Also, a homeopathic drug, a flower essence coming into resonance with a pathological point may help to solve and to heal such difficult cases. However, in the Manimalbalance system I always perform ear diagnostics and ear AP. Some skull AP charts in cats has already been presented at a previous IVAS meeting. Brand new are western hand acupuncture charts, derived from the old Korean human hand acupuncture charts. There is also the new energetic “meridian” from Dr. F. Bahr, Germany, which shows all the new Chakras on the forearm (-3 till 18) with its resonating AP Point. These Chakra points are named En-3 (Super Omega Point, Black Kangaroo Paw), En-2 (Rebellious Qi, diagnostic Carcinoma point, Pale Sundew), En-1 (Rebellious Kundalini goddess, Purple Nymph Waterlily), En0 (pH diagnostic point, Correa), Chakra 1 (Muladhara, CV01, Orange Spiked Pea), Chakra 2 (Svadish-tana, CV04, Macrozamia), Chakra 3 (Manipura, CV08, Snakebush), Chakra 4 (Anahata, CV 17, Southern Cross), Chakra 5 (Vishuddha, CV22, Red Feather Flower), Chakra 6 (Anja, Yintang, Swan River Mirtle), Chakra 7 (Sahasrara, One Sided Bottlebrush), Chakra 8 (Wiraocha, Orange Lechenaultia), Chakra 9 (Cosmos, Spirit, Silver Princess Gum), Chakra 10 (Protective Chakra, Many Headed Dryandra), Chakra 11, Small Pocks pollution, Balga), Chakra 12 (Plague pollution, Pink Impatiens), Chakra 13 (Eliminates all 5 pathogen factors: wind, heat, coldness, wetness, dryness and fire, TH05, Mulla Mulla). Chakra 14 (RNA information, TH08, Black Kangaroo Paw), Chakra 15 (Master point of homeopathy, TH08-1, Blue Lechenaultia), Chakra
16 (Spiritual inside kernel, Angelica), Chakra 17 (Laterality instability, Karma, TH08-3, Yellow Lechenaultia, Scleranthus), Chakra 18 (Dharma, TH08-4, Hybrid Pink Fairy Orchid).

Whatever you do, you should have the knowledge of different reflex zones, in order to induce an optimal healing process.

By means of different original, also traditional reflex zone charts, I want to show you, how to involve ECIWO systems into our thinking and therapy program. Hand acupuncture in humans becomes more and more actualised, especially through the detection of the new “Energy Meridian” according to F. R. Bahr and the appropriate Chakras 1-18. Thus the hand and forearm acupuncture is very useful. Most often we find three gold needle points in a row. On the other hand, classical hand acupuncture is very painful, because humans are very sensitive at the fingers.

Figure 1a Korean Hand Acupuncture acc to Kubiena & Mosch-Kang (2)
Case report: A girl with chronic diarrhoea came to me. All classical remedies and all classical therapies failed. Then I saw her tongue piercings: located exactly in the midline where the digestive tract is reflected. After elimination of all metal piercings the diarrhoea disappears over night without application of any drugs or needles.

Figure 1b The New “Energy Meridian” Acc to Bahr (Davos, DAA Congress 2009)

Figure 2 Tongue Reflex Zones Acc. to Deppert (9)
Case report: A 6 year old farmer’s boy shot himself with a rifle through his foot at the acupuncture point GB41. He went to the doctor to have the projectile removed. However, dust and a micro heavy metal pollution remains. Since that day he suffered for 55 years from an awful headache at GB01. Homeopathic elimination of the heavy metal and neural therapy at GB41 releases the headache immediately.

Figure 3 Foot Reflex Zones Acc. to Marquart (9)

Case report: A 72 year old farmer could suddenly not move his swollen tongue properly, could not eat anymore and had big problems in speaking. The elimination of two metal titanium prostheses and a gold bar implantation behind the ear at the reflex zone of the tongue allowed the problem to disappear over night.
Case report: A 48 year old fat lady with an increasing diabetes mellitus and injections of insulin every day came to me for support. We had to nourish her according to the five elements. Many Amalgam fillings were the reason for the problem. A supplementation of the antidote 200mcg Selenium yeast every day and a gold bar implantation at the ear acupuncture point SP02 (pancreas) at the left side (she was a right hander) she could recover slowly with anti diabetic tablets and later on the pancreas recovered more and more.
Case report: A 66 year old lady with chronic cystitis plunged in looking for support. Her sexual behaviour was abnormal and she had to swallow many pills and use vaginal ovules, etc. A completely restored mouth with gold implants was the reason. Mostly the gold alleys contain palladium. A supplementation of 5 mg of folic acid at 10 am, the tonification of the kidneys with Padma 28 (Resonance of KI07) and every afternoon an apple pie with cinnamon (Resonance of BL 67) let the cystitis disappear within 2 weeks.

Case report: Dogs with hip dysplasia, subluxation of intervertebral disks, sciatic problems, etc. become a so called “forceps gold-silver” implant at the ear. This procedure is functioning very well with surprising effect.
Case report: A 51 year old lady had to undergo a brain tumour operation twice. She had a plastic skull as a protection because the bone was full of metastases. She developed incredible migraines. By means of the VAS I found enormous heavy metal pollution and a thick scar crossing the first scar. I injected this crossing scar point with 1% of scandicaine and the headache disappeared immediately. One week later she came again with the same symptom. A gold bar implantation of 1cm allowed the migraine to disappear for ever. Later on her doctor called me to ask what I did, because she no longer needed painkillers prescribed.

Figure 8 Scull Reflex Zones I, Sensible-Sensorial Zone Acc. to Zeitler, Bahr (9, 4)

Case report: A 21 year old boy had broken his left clavicle in an accident. Two small titanium screws were implanted to fix it. When he went to the military service, all of a sudden he could no longer lift his left arm. Anti-titanium drops (various Flower Essences with resonance to titanium) and Acupuncture of SP02 (Resonance Pt of titanium) allowed proper movement of his arm again. Later on the screws were withdrawn, the scar was detoxified with neural therapy and the problem was solved.
Figure 9 Infra clavicular Reflex Zone II Acc. to Klowersa (Davos, DAA Congress, 2008)

Case report: A Lama could not properly eat anymore and lost weight visibly and rapidly. It became lame at the knee. A radiograph of the knee was negative; however, a rotten molar tooth with a large granuloma was discovered as the aetiology. The rotten tooth was extracted, the pulpa cleaned with antibiotics. As soon as this was done the knee recovered very quickly, because the first upper molar tooth has resonance with the knee.

Figure 10 Teeth Resonance System Acc. to Voll and Kramer (9)
Figure 11 Ting Point ECIVO System Front Limb Acc. to Roesti et al. (10)

Figure 12 Ting Point ECIVO System Hind Limb Acc. to Roesti et al. (10)
Case report: A 50 year old man suffered from progressive thoracic pain. He went several times to the chiropractor with more or less good results. The reason was not the vertebra but the gall-bladder full of stones. He underwent the endoscopic operation to remove the stones. One month later he had again lower back pain. I found a navel disturbance focus, needled the ear acupuncture point that resonates with CV08 he had to supplement himself with EFA’s (the navel has resonance to EFA’s).

Case report: A jumper horse hit several times its metatarsal bones at the wooden bars and developed swollen painful plantar oedemas. The local veterinarian treated for weeks locally with anything he could suggest. I found a blocked sciatic nerve, the trigger point of which had to be neutralised (neural therapy, massage, acupuncture, etc). A Moxa treatment at Baihui (located at the lumbosacral joint) solved the problem very quickly.
Case report: A cow suffering under chronic recidivist mastitis was treated with many medications. Milk samples were taken, bacteriologic cultures and antibiotic sensitivity were done, and treated accordingly and nothing helped. I found a chronic pyometra, like endometriosis. After several treatments for the Uterus the mastitis disappeared.
Figure 15 Segmental Therapy in the Bovine Acc. to Zohmann & Kasper (12)
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Disturbance Foci in TCM, TCVM
Andy Roesti, DVM, Private Veterinarian, Integrative holistic medicine, Manimalbalance
Chrümigstrasse 18
CH 3752 Wimmis, Switzerland

There are many approaches to a healing process. However, in therapy resistant patients it is indispensable to eliminate the effect of all disturbance foci: exogenous, endogenous, iatrogenic, mute, emotional, psychic, mental and spiritual. On my DVD I described all different disturbance foci in detail.

With power point facility I want to inform all acupuncturists and holistic healers about the importance and absolute necessity of the elimination of those disturbance fields. In TCM such disturbance foci weaken the Yin aspect extraordinary and therefore we may needle as much as we can, but it will not lead to appropriate long lasting results. Therefore the TCM uses much more herbs and mushrooms to stabilise the Yin aspect. By means of the 3 Yin magisterial (Taiyin, Shaoyin, Jueyin) prescriptions I am able to substitute chronobiologically, according to the Chinese clock, optimally all Yin deficiencies.

In many slides I explain the negative effect of piercings and tattoos according to their reflex zone (place in situ). Different metal- or colour incompatibilities lead to mute disturbance foci, similar to what scars or dead teeth may provoke.

- My Goal today is to give you the key to solving a chronic health problem caused by a disturbance focus in patients resistant to treatment despite all diagnostic and therapeutic efforts
- Tell you what a disturbance focus may look like
- Open your eyes for hidden foci in patients who are resistant to therapy

Definition of a disturbance focus: A focus is a harmful influence which interferes with the body's system of self-regulation, especially with the control of stimuli that disturb the body's order. The reasons are: Overload of the feedback system

- Through non physiological tissue changes and abnormal reactions, a focus subjects the complex feedback mechanism to stress by overstimulation and induces disturbances of remote structures that are already under stress
- First strike and second strike
A body falls ill when it is no longer able to ward off a chronic focal activity or when a second blow strikes.

The connective tissue plays a vital role by acting as a “transit system” which facilitates the many functions of the cells in the body. Every molecule that needs to be transferred to a cell, that specific unit of the body's functions, must pass through the connective tissue. The connective tissue allows that each cell is supplied with all the appropriate substances and allows an avenue to eliminate waste as well as providing a medium for neural stimuli and hormonal control. If for any reason the body loses its equilibrium and feedback regulation, this fine-tuned tissue system no longer functions.

- Poor or unbalanced nutrition
- Insufficient fluid intake
- Inappropriate allopathic medication
- Lack of exercise
- Fields of disturbance
- Stressful conditions as precursors of possible fields of disturbance (Hg, Pd, Pb, Cd, kerosene, dioxine, formaldehyde, pollutants)

**Disturbance at a higher energy level:**

- According to TCM, Qi is blocked in such a focus
- Whatever organ it concerns, its specific frequency is diagnostic
- Considering the coupling of the wife-husband rule in the 5 element theory, we are diagnostically searching with both frequencies
- By means of the VAS we may exactly evaluate the focus of the scar, which comes into resonance with our frequency, etc.
- Involving the neural coupling spreading from segment to segment Huneke’s Phenomenon: The immediate reaction
- Viscerocutaneous reflex therapy by means of 1% local anaesthetic (procaine, xylocaine, scandicaine)
- Pox scar→shoulder arthrosis (just before implantation of a artificial shoulder joint)
- Gunshot wound in the foot→painful headache for 60 years
- Navel-endoscopy (cyst on the ovary) → chronic back pain
- Split upper incisor (hockey player) → chronic pulmonary disease

Resistance to treatment: A focus may render the body largely unresponsive to regulatory therapies like acupuncture, homeopathy, neural therapy, chiropractic, etc., because the symptom is not the primary impairment itself, but the condition is the result of a primary focus.

Chronicity of symptoms: If the patient is under the influence of a chronic focus, the disturbing stimulus of the focus will affect the currently weakened organ, causing chronic- or a worsening of the symptoms. The focus is usually already present before the patient noticed the illness (vaccination) or has been acquired after the onset of illness (scar from an injury) and now interferes with the healing process.

Preferred target organs. Whether a focus is pre-existing or acquired later, a focus is able to interfere everywhere and anytime at a week spot on the body. Depending on their location, some foci have preferred target organs (teeth)

Exogenous disturbance foci

Figure 1 Work of Art of Many Possible Disturbance Foci in the Bovine
Figure 2 Ear Disturbance Foci with Different Metals at Different Reflex Zones

Endogenous disturbance foci

Figure 3 Bovine Heifer with Papillomatosis at the Udder
Figure 4 Horse with Chronic Mucopurulent Sinusitis
Iatrogenic disturbance foci

Figure 5 Filly with a Vaccination Abscess, Which Had to be Operated Sideward Over the Thorax
Figure 6 Panorama Radio View of Man’s Mouth with Many Titanium Implants and Gold Inlays

Figure 7 Tattoo Removal by Means of a High Power Laser
Figure 8 Tongue Piercings Provoking Chronic Diarrhoea

Masked / psychic disturbance

Figure 9 A Herd of Scottish Highlanders Could Not be Kept in a Kraal for Vaccination Purposes. The Heifers Smell a Rat.
Mute disturbance foci. Most often mute disturbance foci occur in the men-animal-bond-relationship. This occurs mostly when the animal is dominant over the owner or when there are freeloader groups kept together in too small paddocks and the individual option to flee is not given anymore.

Figure 10 The Dominant Haflinger Doesn’t Want to Enter the Trailer. With No Means, Three Shouting Persons with Rope and Whip Didn’t Succeed to Load the Horse

Healing options ➔ Eliminating all disturbance foci

- Homeopathy
- Acupuncture
- Neural therapy
- Substitution of resonating oligoelements and vitamins. Chronobiologically by means of the 3 Yin magisterial prescription according to Andy Roesti.
- Sweet and sour, Yin nourishing
- Chelating by means of NAC, DMPS, DMSO, etc.
- Detoxification by means of the principles of Klinghardt and Dorfer
- Own blood/milk nosode according to Korsakoff
- Flower Essences (BF, AL, AB, CF, SAFE, etc.)
Acupuncture diagnostic and therapy is done classically by means of the VAS

Neuraltherapy is applied any time I suggest a scar disturbance focus. Any disturbance focus corresponds to a vitamin, a trace element or an amino acid triplet. Most often I substitute the appropriate subliminal element. I created my “Three Yin” tablets according to the Chinese clock. I administer Taiyin in the morning, Shaoyin at noon and Jueyin in the evening

Furthermore I treat chronic Yin deficiency by means of “Vital Fungus” preparations. All fungi are absolutely Yin:

- **Reishi, Ganoderma lucidum (Ling Zhi)**, contains polysaccharides and triterpenes, vitamins, oligoelements, amino acids and has its greatest effect on Taiyin and Jueyin. It influences the lungs, the bronchia, the skin and bone marrow. However, it also influences the liver, the tendons and sexual organs (prostate).

- **Shiitake, Lentinula edodes (Xing gu, Dong gu, Hua gu)**, contains ergosterol (provitamin D), eritadenine, vitamin B complex, the polysaccharides lentinan, lenthionine and alpha glycan. Thus, it affects for the most part the Shaoyin (heart and blood vessels, teeth and joints) and Jueyin (liver, tendons and muscles). It is an immune stimulating, anti-carcinogenic, anti-coagulative, anti-thrombotic, antibacterial and anti-viral (herpes simplex) fungus.

- **Cordyceps sinensis (Tung Chung Shia)** contains very important highly effective polysaccharides, amino acids, vitamins and oligoelements. Cordyceps is a fungus growing on a caterpillar in the Tibetan Highlands. Its most significant effect occurs in all three Yin aspects: Taiyin, Shaoyin and Jueyin. It is indicated for the lungs and bronchia, the heart and blood vessels, the kidneys and for liver and sexual organ problems.

- **Coriolus versicolor (Yun zhi, Turkey tail)**, contains PSK (polysaccharide Krestin), PSP (polysaccharopeptide), VPS (Versicolor polysaccharide) and affects for the most part the Taiyin and Shaoyin. We cannot eat this fungus; however, we drink it as a tea against cancer (Colon carcinoma) and it is an important antioxidant.
• Hericium erinaceus (Hou tou gu, lion’s mane, bearded tooth mushroom, hedgehog mushroom), contains D-threitol, D-arabinol, and palmic acids. Hericium has the most influence in the Taiyin (oesophagus, stomach, skin, gut system) and Shaoyin (blood vessels and the brain). It is an effective antioxidant, regulates the blood lipids, diminishes the blood glucose (anti-diabetic), is anti-dementic, and works against oesophageal and stomach cancer.

• Coprinus comatus (Shaggy mane, Shaggi’s ink cap, Lawyer’s wig) contains 20% crude protein and 20 free amino acids, (8 essential for humans), vitamin K, Fe, Cu, Va, Niacin and vitamin C. Also high in lectine, l-ergothionine, fucogalactane and acts as anti-fungal, -bacterial, -viral, -protozoal, -oxidant, -inflammatory, -hypertensive. It lowers cholesterol, acts as a diuretic, is hepatoprotective and is a potent nerve tonic. It affects most strongly the Taiyin (spleen & pancreas, mam- ma, connective tissue, etc.)

• Auricularia polytricha, (Mu-err, Jew’s ear), contains essential proteins, Ca, Mg, and vitamin D. It helps in circulatory problems, arteriosclerosis, is anti-thrombotic and anti-cholesterolemic. It affects primarily the Shaoyin.

• Agaricus blazei, (Himematsutake, Almond Mushroom), contains the utmost important polysaccharides (beta 1-3, 1-4, 1-6 D-glucanes, benzaldehyde, benzylalcohol, methylbenzoate, benzonitril) and acts as an important immune in- ducer with interferon and interleukin activity, prevents cancer metastasis, lowers blood sugar, blood pressure and cholesterol. Its activity is most seen in the Taiyin and Jueyin.

• Maitake, Grifola fondosa (Sheeps head, Ram’s head, Hen of the woods), contains im- portant polysaccharides, oligoelements, vitamins, amino acids, etc., and acts as an important adaptogen. Helps with weight loss due to regulation of the serum and liver fats (cholesterol, triglyceride and phospholipids), and regulating blood sugar, blood pressure and affects for the most part all Yin aspects: Taiyin, Shaoyin and Jueyin.
In chelating cases I use N-acetylcysteine, a very sour amino acid. Therefore I add brown sugar to balance it off and I am creating a “Sweet & Sour” system.

Professor Klinghard and Dr. Dorfer created a heavy metal and environmental detoxifying system. Mobilisation of the intra- and intercellular pollution, elimination with “Sweet & Sour” and sweet water ages and substitution of the essential oligoelements and vitamins.

- In very complicated cases I produce an own blood nosode according to Korsakoff from the patient’s blood in the so called one vial method.
- At the end, or sometimes already at the beginning, when the problem is so mysterious and inscrutable I will test man and patient by means of the Bach Flowers with regard to its psychogram. And o wonder, you will find sometimes things you would never have been taking into consideration before.
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Acupuncture as an Auxiliary Treatment of Masticatory Myositis in Dogs: a Case Report
A.P. Cimino, C. C. T. Haddad, DVM, M. Loraire
Student of Institute Bioethicus – Botucatu – SP – Brazil.
Institute Bioethicus – Botucatu – SP – Brazil. Assistants of University of São Paulo Acupuncture
and Chronic Pain Service;
Clinical Veterinary – Bichos e Caprichos – Brazil.

ABSTRACT

Masticatory Myositis (MM) in dogs is a focal autoimmune myopathia which selectively
affects the masticatory muscles and can present with acute or chronic symptoms.

Acute MM presents with pain and swelling of the muscles involved, while chronic MM
presents with atrophy of the masseter and temporalis muscles and difficulty in opening the
mouth. The diagnosis is made based on the history, clinical signs and laboratory exams. Occi-
dental Medical therapy utilizes immunosuppressant drugs. The prognosis is good for acute MM
but guarded for chronic MM.

In this Case Report we used acupuncture as the complementary treatment for chronic
MM in a dog. The TCM theory is that MM is an External Wind-Cold Invasion in the face. The
Treatment Strategy is to Eliminate the External Wind-Cold and Tonify Blood and Wei Qi.

Yuri, a male maltese, was referred for acupuncture. He presented with trismus and atro-
phy and was diagnosed with chronic MM. The main acupuncture points used were: ST 6, ST 2,
SI 18, TH 21, GB 20, BL 12, GV 4, GV 14, CV 24, LI 4, ST 36, SP 6, SP 10.

The patient showed progressive improvement, no recurrence, with return of normal man-
dibular mobility.

INTRODUCTION

Masticatory Myositis (MM) in dogs is a focal autoimmune myopathia which selectively
affects the masticatory muscles and can present with acute or chronic symptoms such as inca-
pacity to open the mouth.

Usually if it is diagnosed early, the treatment with immunosuppressant doses of corticos-
teroids is effective. But if the masticatory muscles atrophy becomes evident and the patient
presents with difficulty in opening the mouth, the immunosuppressant treatment will be no in-
effective and the patient will not able to eat and may even die.
Even when the jaw movement is restored recurrences are common. The excessive use of corticosteroids can causes a lot of collateral effects.

**MASTICATORY MYOSITIS – OCCIDENTAL MEDICINE VIEW**

Masticatory Myositis is the most commonly diagnosed polymiositis. It is a result of an autoimmune disorder associated with antibodies circulating against striated skeletal muscle. Any breed is susceptible, but there is a high incidence in the German Shepherd (de Lahunta, 2009).

There are acute and chronic forms. In the acute forms, the masticatory muscles are swollen and very painfull. Do not try to open the animal’s mouth because this hurts the patient. The reluctance to open the mouth prevents the dog from eating. The swelling is so severe that the eyes may protrude from the orbits. Fever and swelling of the palatine tonsils and mandibular lymph nodes may be present. Biopsy of these swollen muscles will reveal a diffuse necrotizing inflammation with hemorrhage and edema. Inflammatory cells including macrophages, plasma cells, lymphocytes, occasionally are markedly elevated and there will be circulating antibodies to the type II M muscle fibres that predominate in these muscles (de Lahunta, 2009).

Treatment with immunosuppressant drugs will alleviate the acute clinical signs but recurrences may occur. In the chronic phase, muscle atrophy can be severe, and the fibrosis that occurs in the muscle can, in time, mechanically prevent the mouth from opening. Some dogs only have a chronic myositis only of the masticatory muscles, but it results in the same severe atrophy and inability to open the mouth (de Lahunta, 2009).

Do not try to force the mouth open under anesthesia because the jaw can be fractured. If immunosuppressant drug therapy in ineffective, surgery can be considered, cutting the attachments of the temporal and masseter muscles to the ramus of the mandible (de Lahunta, 2009).

There is no neurologic disorder other than tetanus that causes the inability to open the jaw. The term trismus refers to the excessive uncontrolled contraction of the masticatory muscles that is present in tetanus. It is not an appropriate term for the chronic myositis, which is a mechanical resistance (de Lahunta, 2009).
Masticatory Myositis – Traditional Chinese Medicine View

The TCM diagnoses for Masticatory Myositis is an External Cold-Wind Invasion causing acute symptoms of cooling the muscles which can eventually lead to a chronic stage (Schoen, 2006).

The Principle of Treatment is Eliminate the Wind, Eliminate the Cold and promote the Qi and Blood flow to help to nourish the muscles. The most used points for the treatment are: ST 2, ST 6, SI 18, TH 21, CV 14, GB 20, LI 4, BL 12, GV 4, SP 6, SP 10 and ST 6 (Schoen, 2006). Moxa can be used to eliminate the Cold (Schoen, 2006).

Case Report.

Yuri, male maltese, 5 years old, was referred for acupuncture, with a diagnosis of Chronic Myositis Masticatory. He presented with severe atrophy of the masseter and temporal muscles, tender head, trismus, loss of appetite and weight. There were no abnormalities in the skeletal muscles of the limbs and the sensation of the masticatory muscles was preserved. The values of the blood tests were normal.

A biopsy of the temporal muscle was done and the histopathology analysis was: “Severe atrophy of the muscles fibers, with intense proliferation of organized fibrosus connective tissue (fibrosis of the endomisium and perimisium). A few muscle fibers are preserved. There is multifocal infiltration of lymphocyts, plasmocitis and eosinophilus”.

The diagnosis was: chronic myositis with severe atrophy and fibrosis.

The pathologist observation was: “The lesion characteristics are compatible with myositis of the masticatory muscles. The lesion severity, especially the grade of the fibrosis showed, seriously disturbs the return of the capacity of the normal function of the muscles involved”.

After that, immunosuppressant treatment was prescribed.

Initially prednisone 2mg/Kg BID was used during 7 days. Together with the immunosuppressant treatment Acupuncture was used too.

The selected points in the first section were: ST 6, ST 2, SI 18, TH 21, GB 20, BL 12, GV 4, GV 14, CV 24, LI 4, ST 36, SP 6, SP 10.

The patient’s tongue was red with a thin white and humid coat. His pulse was superficial and his skin was red and hot when touched. No signs of pruritus or fever were presented. The battle between Wei Qi and Wind explains the erythema.
Next day after the treatment the patient presented improvements, no more trismus and he was eating better.

In the first week, two acupuncture treatments were done. He presented with progressive clinical improvements. The muscle atrophy was stooped and he could open and close his mouth normally, eat dry dog food and vocalize, even with the severe atrophy.

Then the prednisone was prescribed 2mg/Kg SID for 20 days. The acupuncture sessions were done twice a week and the same points were used.

During this period the patient gained weight and had no recurrence.

The prednisone dose was reduced to 1mg/Kg each 48 hours for 30 days. The acupuncture sessions were kept the same.

After 50 days of treatment the patient had regained his normal weight, and showed no functional restrictions of the mandibular movements and no recurrence.

**ACUPUNCTURE POINTS: LOCALIZATION AND ENERGETIC FUNCTION**

ST 2: Localization: on the infraorbital foramen, rostroventral to ST. The infraorbital n. is deep to this point.

Function: dispels Wind and Cold and relaxes the face sinews.

ST 6: Localization: in the depression in the belly of the masseter muscle, rostral to the angle of the mandible.

Function: moistens the throat, dispels Wind and Cold.

ST 36: Localization: 3cun to ST 35, distal to the tibial tuberosity and lateral to the cranial border of the tibia, in a depression approximately in the middle of the cranial tibialis muscle.

Function: regulates, strengthens and tonifies Spleen and Stomach, tonifies nutritive Qi and warms Cold.

SI 18: Localization: ventral to the zygomatic arch at the level of the lateral canthus.

Function: Dispels Wind and Cold.

TH 21: Localization: rostral to the supratragic notch, directly dorsal to SI 19, at the caudal border of the mandible, dorsal to the condyloid process, with the mouth open.

Function: opens and benefits ears, dispels Wind and Cold.
GB 20: Localization: in the dorsal-cranial aspect of the neck, below the occipital bone, in the depression medial to the jugular process of the occipital bone in the depression between the m. sternomastoideus and the m. sterno-occipitalis.

Function: releases exterior conditions, dispels Wind, subdues Yang Liver, relaxes sinews.

BL 12: Localization: 1.5cun lateral to the causal border of the spinous process of the 2nd thoracic vertebra.

Function: known as “Wind’s Gate”, diffused Wei Qi, dispersing External Pathogenic Factors specially Wind.

GV 4: Localization: on the midline, between the dorsal spinous process of the 2nd and 3rd lumbar vertebrae.

Function: source of Qi, Kidney Qi and Essence. Regulates the Water Pathway, dries Damp and warms the Yang.

GV 14: Localization: on the midline, between the dorsal spinous process of the last cervical and the first thoracic vertebrae.

Function: tonifies Wei Qi, facilitates the Qi flow, Dispels Wind and relaxes the sinews.

CV 24: Localization: in the depression inferior to the mentolabial groove on the anterior midline.

Function: Dispels Wind and Cold and relaxes the facial sinews.

LI 4: Localization: between the 1st and the 2nd metacarpal bones, approximately in the middle of the 2nd metacarpal bone on the radial side.

Function: the Master point for face, alleviates exterior conditions, facilitates Qi flow, dispels Wind and Cold.

SP 6: Localization: 3cun directly above the tip of the medial malleolus, on the caudal border of the tibia, on the drawn from the medial malleolus to SP 9.


SP 10: Localization: when the stifle is flexed, the point 2 cun above the carnio-medial border of the patella, on the bulge of the cranial portion of the m. sartorius.

Function: regulates Spleen and invigorates Blood.
CONCLUSION

The treatment using steroids and acupuncture showed efficacy to treat Chronic Masticatory Myositis even with a guarded prognostic. The clinical signs were interrupted quickly and the patient completely recovered his mandibular movements with no recurrence.

Based on the clinic veterinary report which followed this case, other animals previously treated, presenting with the same grade of muscle atrophy, didn’t show such a good response only with a steroid therapy. Some of them didn’t recover mandibular movement and died.

The patient’s owners related that they were discouraged by other veterinarians from treating the patient saying that there was no good response for this disease.
References

References Available from Author Upon Request.

Acupuncture, chiropractic and dentistry are modalities that can be used alone or in combination to diagnose and treat a problem. The following discussion considers the use of these in the diagnosis and treatment of Equine Temporomandibular Joint – Myofascial Pain Syndrome (TMJ-MPS). Clinical signs of this syndrome can mimic signs associated with dental and chiropractic problems of the poll area, as well as behavioral problems. Some of these clinical signs are: bad attitude, mastication problems, head shyness, spookiness to loud sounds and bright lights - as if the horse has a migraine headache; problems with taking the bit or bit pressure, unwillingness to bend at the pole or to maintain flexion of the poll, and stiffness – especially in the head and neck area.

The primary involvement of acupuncture in this syndrome is the diagnostic palpation of the head and poll area. Diagnostic palpation can aid in the identification of any contributing factors and treatment. This diagnostic process involves detecting sensitivity to digital palpation of four acupuncture points (Figure 1):

- **Stomach 7 (ST 7)** is a point located in the depression of the masseter muscle, just ventral to the zygomatic arch, cranioventral to the temporomandibular joint (TMJ) and caudo-ventral to the lateral canthus of the eye.
- **Mian-Shen-Jing (MSJ)** is located 1 cun rostroventral to the mandibular condyle.
- **Triple Heater 17 (TH 17)** is located in the depression between the mandible and the mastoid process, caudoventral to the ear.
- **Bao-Sai** is located in the depression in the masseter muscle, midway on a line from the lateral canthus of the eye to the ventral aspect of the mandible, at the level of and just caudal to the interocclusal space of the lower 3rd molars (311/411).

The last portion of the examination is the digital palpation of two structures:

- Medial pterygoid muscle, located on the medial aspect of the angle of the mandible
- **TMJ**, in its resting position and in lateral motion. Motion palpation of the TMJ is used to detect any crepitation.
Before palpating the TMJ, ST 7 and MSJ, palpate the zygomatic arch on the same side, until the horse stops reacting to the pressure. This conditions the horse to being palpated in that area, and helps to avoid a false positive response by giving a base line for comparison between the palpations of the negative control area and a positive diagnostic point/area. Using the same protocol, the caudal and ventral edges of the mandible can be used as negative control areas before palpating TH 17, Bao-Sai and the medial pterygoid muscle. While all of the points and structures are evaluated bilaterally, they are palpated individually to allow for an accurate assessment of each one.

Sensitivity to digital palpation of these points and areas is helpful in the diagnosis of a problem, and helps in determining the response to treatment by its loss or persistence. Sensitivity on digital palpation of ST 7 and/or MSJ could be indicative of a problem with the TMJ itself, masseter myofascial pain, or both. Static and motion palpation of the TMJ to detect sensitivity or crepitation can help to determine if the TMJ is involved. Sensitivity of the medial pterygoids can also be indicative of TMJ-MPS, and in combination with ST 7 and/or MSJ (masseter trigger points) can be even more diagnostic for this syndrome, since this would represent trigger points in both lateral and medial muscles of mastication. In some cases, the medial pterygoids may be the only area of sensitivity.
One contributing factor in the development of TMJ-MPS is the conformation of the poll area, more specifically the amount of space between the wing of the atlas and the mandible. The width of this space, also known as the “Wing of the Atlas – Mandible Distance” (WAMD) (Figure 2), is evaluated with the horse in a normal, upright position. The desired width or distance is a minimum of 2 fingers on an average sized horse using an average sized human hand. This is more of a problem for horses that are asked for flexion in the poll area. As the flexion increases, the mandible comes closer to the wing of the atlas and the WAMD is decreased. If there is not sufficient room, excessive pressure is applied to these two structures, the soft tissues that exist between them, and the TMJ. This can be manifested as a chiropractic problem in the poll area (“Dorsal Atlas” - Figure 3). This excessive pressure can not only cause sensitivity to digital palpation of ST 7 and/or MSJ, but can also affect TH 17. Differentiation of these sensitive points/areas area as follows:

- If ST 7 and/or MSJ are the only or the most sensitive points of all four of these points, then TMJ-MPS syndrome is considered to be the primary problem and its predisposing factors need to be investigated.
- If sensitivity at TH 17, ST 7 and/or MSJ is noted, then the problem is considered to involve the poll area as well.
- If TH 17 is more sensitive than ST 7 and/or MSJ, then the problem is considered to be a primary poll problem (conformation, chiropractic) with secondary TMJ-MPS.
- If Bao-Sai is the most sensitive or the only sensitive point, then it is considered to be a local problem involving the soft tissues or cheek teeth in that area.
A majority of horses with a narrow WAMD will have TMJ – MPS, potentially making them poor prospects for any discipline requiring flexion at the poll. Some horses with a WAMD of less than 2 fingers will show little to no sensitivity at ST 7, MSJ or TH 17. The difference between horses that do or do not show sensitivity at these points can be correlated to the bulging or lack of bulging of the soft tissue in the WAMD space. Those horses who exhibit bulging of soft tissue in the WAMD space seem to have a higher percentage of sensitivity at ST 7, MSJ or TH 17, whereas those without bulging soft tissue have a lower percentage. When faced with this conformation problem, the owner should be encouraged to feed the horse on the ground. When the horse’s head is down, the mandible is in a more rostral position, which creates more space between the mandible and atlas. This increase in the WAMD space encourages the atlas to move ventrally, thus helping alleviate any stress and damage resulting from flexion. Stretches that encourage complete extension of the poll area will also encourage ventral movement of the atlas, thus alleviating or decreasing sensitivity at ST 7 and TH 17 (Figure 4). For sensitive medial pterygoid muscles, rostral traction of the mandible is helpful (Figure 5). If these stretches do not provide relief, or relief is short lived, then chiropractic may be needed to address the problem.
Another contributing factor of TMJ-MPS is dental problems. One of the most common dental problems is an abnormal pattern of mastication, which may result from dental malocclusion and/or pain. Not only can dental malocclusions result in problems during mastication, but in the resting phase they can cause abnormal stress on the TMJ and surrounding soft tissues. One example of this would be an “Over Bite” or “Over Jet” conformation (Figure 6) where the upper incisors “capture” the lower incisors thus restricting the “rostral” movement of the mandible as the head is lowered, which may actually cause the mandible to rest in a more caudal position. This restriction in rostral movement of the mandible can also result from, or be the cause of large rostral hooks on the second upper premolars (106/206) and large caudal ramps/hooks on the last lower molars (311/411). This could result in narrowing of an already narrow WAMD. If these dental problems are addressed properly, there is a potential to widen the WAMD. This effect may result in a decrease of sensitive acupuncture points and chiropractic problems in the poll. Another example of a dental problem is a “Slanted” incisor bite (Figure 7), which will result in the mandible resting “off center” or “more to one side”. This “off center” position of the mandible will also add stress to the muscles of mastication and the TMJ. It needs to be noted that the masseter muscle is one of the primary muscles affected by this stress. Sensitivity of its trigger points, ST 7 and/or MSJ, could be indicative of a dental problem. Many of these cases respond to proper dentistry, even if other factors are present. If it is perceived that more than one modality of therapy is needed to correct the horse’s problem, it is usually best to start with dentistry. Before any dentistry is performed, these points are palpated to establish a pre-dentistry base line. Dentistry involving prolonged use of the speculum, abnormal head position (hyperextension or rotation), incorrect balancing of the dental arcades, and too little or too much correction can also cause
TMJ-MPS. Figures 8 and 9 show an example of a post dental chiropractic procedure you can use to alleviate any negative effects of hyperextension that occurred during the dental procedure.
While these problems are seen in all breeds, the Arabian horse seems to have an increased incidence of a narrow WAMD and a dental conformation that restricts rostral movement of the mandible. The affected horse will always want to “flex or bend behind the poll”. Awareness of this narrowed WAMD is a relief to some owners/trainers who were considering the use of severe training measures to get the affected horse to “flex or bend at the poll”, which would only lead to more pain in that area followed by behavior and attitude problems. In this case, part of the treatment is the acceptance by the owner/trainer of the limitations of their horse and the avoidance of these severe training measures.

As mentioned before, a narrow WAMD can also be a chiropractic problem. This can involve the mandible, skull, atlas and even the axis. Chiropractic evaluation of these structures should be considered, especially if the dentistry and stretches do not alleviate previously found sensitive acupuncture points. As a result of previous stresses, these structures may not be able to complete their full range of motion. Chiropractic can help re-establish that range of motion.

Anti-inflammatories and joint therapy (either direct or indirectly) can be indicated. A series of Adequan i.m., and/or Legend i.v. injections are very helpful with the TMJ itself.

Finally, acupuncture helps alleviate the spasms and pain associated with TMJ-MPS problem. From a traditional Chinese medicine (TCM) approach, these areas of sensitivity are “areas of excess” where the flow of Chi/Blood is blocked. Using this TCM thought process allows us to utilize the appropriate acupuncture points for treating this problem. The two meridians directly involved in this examination are the Stomach (ST) and Triple Heater (TH) meridians. Sensitivity at ST 7, MSJ (which is on the pathway of ST meridian) or TH 17 would indicate a blockage in
those meridians at those points. There are several ways in which to treat this blockage. The first way is to treat the local points themselves to disperse the blockage. In my experience, LI 18, located cranioventral to the C2-3 junction on the ventral border of the cleidomastoideus m, has proven to be beneficial in treating sensitivity in the medial pterygoids. Acupuncture needles, laser, topical magnets or any combination of these three methods may be used. A second approach is to treat the distal points on those same meridians:

- Stomach 45 (ST 45), located on the dorsal midline of the rear foot, in a depression just proximal to the coronary band, or Stomach 44 (ST 44), located on the dorsal midline of the rear leg, just distal to the fetlock joint, at the level of the junction of the interosseus and common digital extensor mm. (Figure 10).
- Triple Heater 1 (TH 1) (Figure 11) which is located on the dorsal midline of the front foot, in a depression just proximal to the coronary band can be used for the.
- Large Intestine 1 (LI 1) (Figure 11) is located on the dorsomedial aspect of the front foot, in the depression just proximal to the coronary band, approximately 1/3 the distance from the dorsal midline of the coronary band to the palmar border of the medial bulb of the heel.

These points are usually treated with a dry needle for an average of 20 minutes, or with hemoacupuncture. The last approach utilizes Master points that can treat the affected area(s):

- Lung 7 (LU 7, the Master point for the head and neck region is) (figure 12) which is located in a depression on the medial surface of the radius, 1.5 cun proximal to the most medial prominence of the styloid process, 0.5 cun distal to the level of Pericardium 6 (PC 6).
- Large Intestine 4 (LI 4), the Master point for the face and mouth is (figure 13) which is located on the medial side of the forelimb, in the depression just palmar to the 2nd metacarpal (medial splint) bone and distal to its base. This would be at the level between the proximal and middle thirds of the 3rd metacarpal (cannon) bone.

These two points are usually treated with a dry needle for an average of 20 minutes. Usually, two or more of the above techniques for alleviating the “meridian blockage” is used, depending on the veterinary acupuncturist and the cooperation of the horse patient. From a Western approach, we know acupuncture is helping to alleviate the spasms and pain from the release
of such things as endorphins, dynorphins and increased cortisol levels. The key is to know which acupuncture points to treat for a specific condition. TCM theory will aid in point selection, and ultimately a more successful treatment.

Figure 10

Figure 11
The use of acupuncture, chiropractic and dentistry in the diagnosis and treatment of TMJ-MPS is a perfect example of how these 3 modalities can be used together. It is important that this approach be considered with other equine problems.

“The body follows the head”. This is a quote that is used by human athletes, especially those performing in such events as gymnastics and diving. The same applies to the horse. TMJ-MPS will affect a horse’s head carriage and the rest of its body through secondary compensation. The treatment of TMJ-MPS will have a similar therapeutic effect. It is a perfect example of how using a multi-modal approach to a local problem can address problems in other areas of your equine patient.
Zone Therapy Acu-Points in Horses with Osteopathic (Chiropractic) Lesions
Kim Samuelsen, DVM, IVAS cert., cert. equine osteopath
Himmerland Horse Hospital, Private: Ejdrupvej 43, 9240 Nibe, Denmark

For some years I have been using zone therapy points while treating horses with osteopathic (chiropractic) lesions. Using these points is facilitating my treatments significantly. They also support or question my osteopathic diagnosis.

The implementation of Zone Therapy Acu-points, also called “Thoresen’s Coronary Band Therapy” (TCT), as an ECIWO System (Embryo Contains Information of Whole Organism) (1) is giving me a lot better results in these treatments. The therapy also shortens the time required to manipulate the lesions back to normal range of motion.

INTRODUCTION TO OSTEOPATHIC EXAMINATION

Osteopathy is dealing with limitations in the normal movements in all joints of the body. In this lecture we will especially consider and examine the equine spine from the occiput (C0) to the coxygeal vertebrae. The terminology (listings) in osteopathy is different from the one used in chiropractics, but the technique demonstrated in this lecture will provide easy correction of joint movements, whether you use osteopathy or chiropractic in your practice.

Figure 1 Loss of mobility in rotation and side bending
Figure 2 Loss of mobility in flexion
This lecture will also include introduction to “Osteopathy – Functional Indirect Technique”. Functional Indirect Technique is a very gentle kind of osteopathy where you go into the lesions with “soft hands” to start an unwinding process.

First we will test our own sensitivity. With only a light pressure (a few grams in theory, I use the weight of my hand = 300 grams) from our hands, we will try to feel the deeper tissues in our own thighs. The same technique is used in osteopathy when we do cranio-sacral treatments. Treatments within the indirect technique is simply to stay in the testing mode and putting more and more light efforts to the restricted movement. The pressure is not static but dynamic, following the rhythmic movement (rotation, side bending or extension/flexion) of the vertebrae.

**Testing technique:** start at C1 (Atlas). Place the neck and the head of the horse on one of your shoulders with your head facing caudally to the horse. Test rotation, side bending and extension/flexion of this vertebra. There should not be any restriction in these movements. Continue with each of the following cervical vertebrae. Right in front of the shoulder the Brachiocephalicus muscle should be palpated for any tension or soreness indicating a problem in the shoulder area. Then move to one side of the horse and start testing the Spinosus process of T3. The test is carried out with the more caudal hand testing that vertebrae in relation to the more cranial vertebrae on which the cranial hand is passively lying just fixating that vertebrae. This goes for all thoracic and lumbar vertebrae except for T3 which is the most cranial palpable of these vertebrae. The test should be repeated from the other side of the horse as some lesions, in my experience, can only (or best) be palpated from one side.

In case of osteopathic (chiropractic) lesions in the limbs or in the column, the practitioner may expect to find hollow points or pits at the coronary band. These active ECIWO- points are felt as longitudinal pits just proximal to the coronary band; about 1 cm long and 3-7 mm wide (Thoresen: 1.5 mm Wide). The points are located from the most dorsal aspect of the toe to the lateral hoof bulb on both front and hind legs. The points are located as described below, starting at the most dorsal aspect of the toe going lateral and palmar/plantar:
<table>
<thead>
<tr>
<th>Front leg:</th>
<th>Hind leg:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fetlock</td>
<td>Fetlock</td>
</tr>
<tr>
<td>Carpus</td>
<td>Tarsus</td>
</tr>
<tr>
<td>Elbow</td>
<td>Stifle</td>
</tr>
<tr>
<td>Shoulder</td>
<td>Hip</td>
</tr>
<tr>
<td>Atlas</td>
<td>Sacral area</td>
</tr>
<tr>
<td>Axis</td>
<td>6. Lumbar</td>
</tr>
<tr>
<td>Following cervical vertebrae</td>
<td>Other lumbar vertebrae</td>
</tr>
<tr>
<td>Thoracal vertebrae to diaphragm</td>
<td>Thoracal 18 to diaphragm</td>
</tr>
</tbody>
</table>

Figure 3 Front limb hoof. 1, Fetlock; 2, front knee, (carpus); 3, elbow; 4, shoulder; 5, right atlas wing; 6, 7. cervical; 7, 4. Thoracal; 8, diaphragm.
Compared to the Ting-points, the ECIWO-points are situated even more distal; right above the coronary band.

A lesion in the column or in a leg (joint) will show ipsilateral in coronary band of the corresponding front or hind leg.

This means that a lesion in extension or flexion of the column will show on both left and right side (front or rear) in the involved ECIWO-points. A lesion in side bending will only show in the coronary band ipsilateral to the muscles or facet-joint involved in the lesion.

Once an ECIWO-point is located, it is needled. Immediately the response in the affected area takes action. The correction can take place right away and with only little effort the normal range of motion can be achieved. By needling the ECIWO-points the self-healing capacity of the body is triggered and by only slight interference of the practitioner the treatment is carried out.

See also page 500 in “Veterinary Acupuncture: Ancient Art to Modern Medicine” by Allen M. Schoen (1).
The needles used in treating ECIWO-points in horses are preferably 0.3 x 30mm needles in tubes. The tube can be placed exactly in the pit above the coronary band. By placing the tube with some pressure at the skin, the horse will hardly feel the insertion of the needle. In any other point on a horse I prefer to use 0.3 x 30mm needles without tubes or even longer needles to reach deeper tissues. But in the end, when it comes to choosing needless, make your own choice and do what you are comfortable with.

*Other points for local muscle relaxation:* In case of considerable back muscle stiffness BL 2 can be needled to give relaxation along the Longissimus dorsi muscle. In this case some acupuncturists use the points GV 26 + Tip of Tail. Personally I prefer to use BL 2.

Girthy horses are often associated with blockage of one or more ribs and rotation of a vertebra between T3 to T8. If the first or second rib is blocked there is always a degree of painful tenderness in the ipsilateral LI 15 or 16. The tender point is to be needled along with the ECIWO-point. If the blocked rib is more caudal, that is the third to the eighth rib, tenderness could be found in PC 1 or HT 1. Tender points should always be needled.

BaiHui is used in all osteopathic lesions located in the hind quarters.

Orthopedic ear-points are also very useful in horses. Along the caudal margin of the pinna you find points for the entire column. (2)

Figure 5 Ear points, spine. Copyright: Uwe Petermann.
Changes in the ear points can be palpated by your fingers: this can be soft swellings or hard nodules. Pulse controlled laser acupuncture is also a very precise way of diagnosing and treating these ear points.

There should always be a consistency between the osteopathic findings, problems experienced by the rider, the active zone therapy points and the ear points. If not, you will have to reevaluate your diagnosis or add another diagnosis.
References


INTRODUCTION

There are abundant veterinary medical resources to suggest what should be in your crashbox, and most of them adequately prepare the practitioner for a successful resolution for the majority of medical emergencies. In this session, we’ll discuss three simple additions that can improve your success rate dramatically – without requiring more space. In my small animal practice, the full contents of my crashbox fit into a five drawer rolling cart. The drawers are alphabetized without regard to whether the contents are allopathic or alternative: for example, acupuncture needles are nestled next to injectable aminophylline, and Yunnan Paiyao, an herbal medication for speedy control of even severe bleeding, shares space with venostomy sets.

Acupuncture needles. These belong in everyone’s crash cart, for use in emergency treatment points. An advantage to the use of acupuncture in emergency medicine is that acupuncture needles can generally be placed while other supportive, more traditional emergency care is being provided by the remainder of the emergency care team without detriment to the patient. Emergency treatment acupuncture points include points on virtually every body meridian. However in true emergency situations, the use of central monitors and other routine monitoring devices, shock pants, and cardioresuscitative equipment mandates the use of peripheral points almost exclusively. Trained acupuncturists are quite familiar with acupuncture point use for emergency patients. However, for the acupuncture-naïve veterinarian, “point prescriptions,” or combinations of points, are generally the most effective way to treat emergency patients. Locations for all points mentioned can be found in any good veterinary acupuncture text.

Use of acupuncture needles requires some degree of practice in hypovolemic patients; the lack of a cutting edge such as is present on a hypodermic needle sometimes renders acupuncture needles less able to penetrate dehydrated skin. Effective sizes of needles for emergency use are usually narrow gauge and short. Two sizes, 0.22x13mm and 0.20x25mm, will generally be adequate for the crashcart. In the absence of acupuncture needles, I would not hesitate to use a 25g hypodermic needle. However, the cutting edge of hypodermic needles represents an additional patient risk, especially if many are used or if disorders of hemostasis are suspected. Acupuncture
needles, by contrast, will rarely produce bleeding. Acupuncture needles require disposal in a suitable sharps container.

Suggested points and point combinations for a variety of common emergency presentations are listed below.

1. Abortion or parturition induction: LI 4; SP; SP 6; CV 2, 3, 4, 5; and KI 11, 12, 13, 14 stimulation for 5-10 minutes, using strong manual stimulation, will stimulate abortion or induction of parturition. I have not done a single cesarean section since I began using these points over 10 years ago.

2. Acute asthma: LU9 and CV22 calm and regulate acute asthma. A special point not on any meridian, Ding Chuan, is also very useful, especially in feline asthma. It is located midway between the GV and inner BL meridian, at the level of the caudal end of C7. Especially in panicky felines, the superficial nature of these points makes laser use more effective than dry needling.

3. Acute vomition: PC6 is exceptionally effective in relieving even extreme nausea and vomiting associated with hypovolemia, whether due to infection, chemo, motion sickness, or postoperative complications.

4. Acute diarrhea with hypovolemia: ST 36 combined with ST 25 is very effective; in exceptionally weak patients, combine with CV8 and use moxa.

5. Cardiovascular collapse: GV26 stimulation induces a profound sympathomimetic response sufficient to induce resumption of normal cardiac rhythm in a flatlined patient. KI 1 and HT 9 must generally be treated for several hours afterwards, at judicious intervals, to maintain a stabilized rate and rhythm.

6. Tachyarrhythmias: PC 5, 6; BL 15; ST 9; BL 1,2; ST 1 all slow HR.

7. Ventricular arrhythmias: PC6 increases the fibrillation threshold and in rabbits, is equally as effective as lidocaine. Sympathetic-induced arrhythmias are controlled well by simultaneous stimulation of PC 6 and ST 36

8. DCM: PC 6 increases stroke volume and CO, increases LV outflow, and decreases pulmonary capillary wedge pressure. PC7 and HT7 improve systolic function in general.

9. HCM: traditional Chinese medical journals report the use of HT8 in improving LV outflow, stroke volume and CO. Use of PC 6 worsened the same patients.
10. “Heartworm treatment crisis”: Needling of HT 7; LI 4; LIV 8; LI 11; and ST 36 can help stabilize patients.

11. Equine colic: Old IVAS ST 2, now San Jiang; BL 21; BL 25; ST 36; CV 1; Bai Hui.

Herbal medicine. There are three herbal medications eminently suitable for use in emergency situations: Yunnan Paiyao, Ren She and Zi Cao. Both Yunnan Paiyao and Ren Shen are available in formulations that are easy to administer (orally or rectally) even to a critical patient. Zi Cao is a topical ointment which is very useful in the emergency management of extensive skin injuries, including burns and trauma.

Yunnan Paiyao is a patent herbal formula whose precise formula is a closely guarded secret by the Chinese government. It first came to common attention during the Vietnamese War, when it was found in the possession of enemy soldiers who utilized it as part of their medical field kits. It is an exceptionally effective hemostatic when used either topically or orally. There is extensive scientific documentation to confirm its positive hemostatic effects. Decreased bleeding time and shortened in vitro and in vivo clotting times have been documented in rats, rabbits, cattle, and ponies. It may be administered before and/or during a hemorrhagic crisis and is commonly used for any of the following: internal and external bleeding tumors, sheared toenails, surgical bleeds, epistaxis, coagulation disorders (i.e. thrombocytopenia), gastrointestinal hemorrhage, abdominal trauma, aural hematomas, avian bumblefoot, ovariohysterectomies in estrus, and oral/dental procedures.

Recommended oral doses for Yunnan Paiyao are as follows:

- Dogs: <15 kg = 1 capsule b.i.d; 15-30 kg = 2 capsules b.i.d.; >30 kg = 2 capsules t.i.d.
- Cat: 1/2 capsule b.i.d.
- Horse: 1 bottle or 16 capsules t.i.d.
- Bird: 1 capsule dissolved in water daily.

Ren Shen, or Chinese Ginseng, is a potent tonifier of the TCM Spleen and Lung and of Yuan Qi, the original source of all of the Qi (energy) of the body. It revives “collapsed Yuan Qi,” a TCM diagnosis characterized by shallow respirations, shortness of breath, cold extremities, rapid weak heartbeat, and a feeble or nonpalpable pulse – a condition akin to what we would call hypovolemic end-stage shock. Extensive medical studies have documented the positive ionotrophic effect of Ren Shen on the hearts of dogs, cats, and rabbits. It is mildly vaso-
constrictive and slightly increases BP. For shocky patients, tiny and frequent doses (0.5-1gm, hourly) are suggested. Known Ren Shen herb-drug interactions include MAO inhibitors, insulin, glipizide, glyburide, and tolbutamide. of particular application to conference attendees may be its amelioration of the impairment effects of ethanol on learning and memory processes.

Zi Cao Ointment is an ointment formulation developed by collaboration between an OMD and a DVM. It is comprised of TCM herbs that in combination, facilitate granulation and that have bactericidal and fungicidal properties. It is exceptionally effective in treating trauma injuries, extensive degloving injuries, skin lesions, burns, and non-healing or poorly healing wounds. From a TCM perspective, it drains damp and heat, resolves Blood stasis, and moves Blood. Because it speeds granulation so effectively, it should NOT be used for puncture wounds. *Homotoxicology*. At least three homotoxicologic remedies have specific utility for emergency room situation and can be injected into appropriate acupuncture points: Traumeel, Hepar Compositum P, and Lymphomyosot. Traumeel is the quintessential remedy for any injury characterized by tissue bruising, crushing, and edema. It is available in tablets, oral drops, oral vials, in a topical cream and a gel, in an ear drop (useful for ruptured eardrums) and in an injectable form which I often utilize in aquapuncture. The common acupuncture technique of “circle the dragon” is very effective when used with injectable Traumeel. In this technique, tiny boluses of Traumeel are injected circumferentially to the lesion.

Hepar Comp, available in tablets and oral vials, is effective in bloat, colic, and anorexia cases, as well as in any case of severe unremitting diarrhea or nonspecific severe abdominal pain. It is available as an injectable and as an oral tablet. It has specific utility in necrotizing pancreatitis.

Lymphomyosot is useful whenever there is extensive generalized tissue damage, such as may occur with degloving injuries, or deep crush or burn injuries. Available as a tablet, oral drop, oral vial, injectable solution, and topical gel, it reduces edema markedly and speeds healing. Another specific application I find great utility for is use in skin graft patients.
References


INTRODUCTION

In 1992, I realized – while listening to a goateed Dr. John Limehouse sonorously make his way through diagnosis and treatment of urinary diseases in the IVAS course one afternoon— that what I was listening to represented an extremely detailed and astonishingly precise way to evaluate and treat the refractory urinary issues I faced in my patients every day. John immediately sparked a life-long interest in the principles of traditional Chinese medicine (TCM). Learning TCM allowed me to view the constellation of signs we call “cystitis” and “incontinence” and “renal failure” through another lens – one much more specific than the one I was used to using. I learned to view my patients as the individuals that they are, with signs unique to them, and that allowed me to develop treatment plans as individualized as my patients. My success in treating these patients then expanded exponentially.

The tenets of TCM that allowed me to make this quantum leap in patient care are easy and intuitive to learn, yet endlessly detailed. One could spend a short concentrated time learning them, yet a lifetime to elucidate the details. Some are quite foreign at first glance – tongue and pulse, for instance. I was taught, in vet school, to use pulse-taking to discreetly determine whether euthanasia solution had achieved its intended effect. Tongue evaluation was largely restricted to determining whether a patient was cyanotic. Other basic TCM diagnostic techniques are common to those used by any good western practitioner: collecting a good history, conducting a thorough physical examination, and making time for questions the client might have. Even these techniques are much more fully developed in TCM, however. We’ll briefly review the basic principles of a thorough TCM examination, and then evaluate, from a TCM viewpoint, how to evaluate and treat the conditions of “cystitis”, “incontinence”, and “renal failure”.

GENERAL TCM DIAGNOSTIC REVIEW

In TCM, disease isn’t an enemy, and health and disease are not the opposing ends of a linear physiologic continuum. Disease, like aging, is a specific process of life that results from the interaction of pathogenic factors and the body’s vital energy, or Qi. A healthy body’s self-regulating systems allow it to acclimate to an ever-changing environment, and a dynamic balance
between Yin and Yang promotes very strong vital Qi. If the body has strong vital Qi, it can clear pathogens, restore balance in the event of an internal imbalance, and repair any damage the pathogen or imbalance may have caused. Ideally, it will do so in a dynamic fashion, so that balance is restored and normal body processes proceed harmoniously.

If a pathogen successfully affects the body in a persistent manner (either because the body cannot clear it or the body cannot repair itself, or both), symptoms and signs begin to be apparent. Symptoms are subjective abnormal sensations and thus, in our animal patients, are often more advanced when detected than they would be in ourselves. Signs, or objective displays of symptoms, are more easily detected in our patients. When we observe a specific pattern of symptom that we have seen before and therefore recognize, we generally feel comfortable enough to call that a specific “disease”. This allows us to embark upon further diagnostics to confirm our impression, and gives us the confidence to develop a treatment plan and to assess the results of our treatment.

In TCM, we rely largely upon pattern identification as a diagnostic strategy. A pattern refers to the collection of signs representing a given stage of a disease, and it provides the perspective for treatment. Yet we recognize that patterns can be fluid and that as such, our treatment approach must be readily modifiable. Some find it terribly frustrating that treatment in TCM can be so “slippery”; I find it endlessly intriguing and ultimately satisfying to know that there will always be a way to proceed, always a way to provide answers to a worried client, and always a way to bring comfort to my patients.

Western medicine is often viewed as a highly developed and extremely sophisticated medical system. The reality is that those of us trained in this medical system are, at best wonderfully sophisticated generalizers and “lumpers” who – despite an amazing variety of diagnostic tools - often fail when faced with patients whose presenting symptomatology deviates from the normal range of signs and symptoms that we have learned. When our treatment protocols fail, what do many of us do? We term the disease idiopathic or assign the failure to the patient, rather than place the failure where it belongs.

Here’s how to avoid failures in the diagnosis and management of urinary tract diseases: examine your patient thoroughly, and listen to what your patient is telling you. Your patient is never wrong. Utilizing traditional TCM examination and diagnostic techniques can greatly ex-
pand your ability to succeed instead of fail. I’m not suggesting that you abandon your current examination methods – rather, I suggest that you continue to utilize them while adding a few more simple and quick TCM exam techniques before simply supplying the first appropriate acupuncture prescription that comes to mind.

The four basic TCM diagnostic tools that most of us already know about - but seldom fully utilize - are wang (inspection), wen (auscultation and olfaction), wen (interrogation), and qie (palpation and pulse examination). Inspection includes evaluating your patient from the moment she enters the exam room. Quickly evaluate gait, bearing, vitality, overall appearance, vocalizations, and then conduct a full medical examination. A thorough eye exam gives a good opportunity to evaluate the cornea, anterior chamber and iris (related to Liver/LIV); pupil and lens (related to Kidney/KI), conjunctiva and sclera (related to Lung/LU), canthal area (related to Heart/HT), and lids (related to Spleen/SP). Remember that Qi from all the organs rises to the eyes and that the Bladder/BL and Gall Bladder/GB channels originate at the eyes. Check the ears, the external opening of the Kidneys, for any excretions, which are very often diagnostic for internal disorders of excess heat (LIV, GB) or deficiency heat (LIV or KI Yin). Evaluate the nose, the external orifice of the LU and a point of penetration of the Stomach/ST channel, for discharges, dryness, or excess moistness; there are at least 8 distinct differentials for nose issues alone! Evaluate the coat carefully; the hair of the head is related to the health of KI and that of the body is related more to LIV. Qi, Jing, and Blood are also reflected in the coat. Examine the mouth, gums, and teeth, recalling that the mouth is the opening of the SP and that both ST and Large Intestine/LI channels go around the lips while the teeth and gums reflect the health of the KI and ST. Note the mobility of the neck; in addition to giving you a wonderful opportunity to evaluate your patient’s chiropractic status if you have this skill, the tone of the neck muscles and vasculature will tell a great deal about the state of the LIV (stiffness, distended/pulsating vessels); the KI and SP (flaccidity); and will help you detect presence of any Qi stagnation or Blood stasis (pain, vascular distension with pulse knotting). Evaluate the thorax and abdomen for shape, symmetry, presence of any masses, and note the respiration – is the patient breathing from the chest or the abdomen? Evaluate the thoracic and lumbar spine, recalling that the GV and BL channels pass along this area while the Dai channel runs circumferentially (like a belt) across the lumbar area. Look for any cold or warm areas along the spine or any points of pain, turgor, or
flaccidity, and evaluate their position. Often, these will reflect pathology in a specific organ relative to BL channel points. Or, they may represent an acute (warm) or chronic (cold) chiropractic subluxation. Inspect all the limbs, recalling that disorders related to the internal organs can sometimes be identified through changes in external acupuncture points along the channels on each limb. Note any areas of limb tenseness, spasm, rigidity, trembling, or flaccidity, as the limbs are often areas where evidence of external pathogen influence will be seen (hot/swollen/painful/reduced ROM joints). Carefully evaluate the skin, which reflects LU health and wei qi (protective Qi) status. Look for color changes (reflecting heat, Yin or Yang-type jaundice, or KI deficiency); swellings or growths, and note the location of any abnormalities seen.

Lastly, evaluate the tongue. While tongue evaluation and use in TCM diagnostics takes years to master, there are a few very easy and quick to learn points we’ll review today. We’ll approach evaluating the tongue as we do the neurologic exam: from general to specific. Is the tongue overall normal or abnormal looking? Is it appropriate for the patient’s size and breed? Is there anything about the tongue that looks especially weird? Where and what? Is the color a nice, healthy pink, or is it another color? Is the tongue a normal shape or is it shaped oddly (thin, thick, short, long, asymmetric?) Is there any kind of a coating on the tongue? If so, what color and where is it? Is there any marking, growth, or crack on the tongue? If so, where? Now, what does it mean? All of the organs, the Jing, the Qi, and the Blood physiologically nourish the tongue in some way, and thus the tongue will reflect pathology in any of these areas. We’ll illustrate with the following tongue and pulse “quiz”.

Next comes auscultation and olfaction of your patient. Noting vocalizations, ausculting the heart and lungs, and paying careful attention to odors is critical because all are related to the patient’s physiologic status and potential pathologic changes. It is possible - through inspection, auscultation, and olfaction - to detect organ and general body pathology far before laboratory changes will ever be noted. Even emotional pathology can be detected this way. In addition to the usual cardiac and respiratory evaluations we are all accustomed to, auscultation can tell us a great deal about the state of the Shen, about body excesses or deficiencies, and about specific Organ pathologies, most notably those of the HT, KI, and LU when we auscult the chest. Ausculting the abdomen can reveal pathology of the ST, SP, LI, SI, and LIV when we hear
borborygmi, belching, and flatulence. Olfaction is another very detailed science in TCM. Fan of five element theory know about normal and abnormal odors associated with each element and, by extension, with each organ. Assessing specifics of the odors associated with flatulence, sweat, stools, urine, vomit, and any secretions from any orifice is a time-honored TCM technique that can reveal important details about a patient’s health.

Interrogation allows us to subjectively obtain details about a patient’s main symptoms as well as any complicating symptoms. I try to always use the classic TCM “ten questions” as part of obtaining a full history. I found, in fulfilling the most current American Animal Hospital Association requirements for medical record-keeping, that acceptable examination forms require at least some version of all ten questions, just as Chinese physicians have been doing since at least the Ming Dynasty (1368-1644), approximate time of publication of the Shi Wen (Ten Questions/Ten Aspects to Interrogate in Verse). There are many versions of the ten questions; here is a simple one:


Obviously, there are other questions you will want to ask within the context of an office visit. However, these ten questions form the framework for making important decisions about diagnosis and treatment. As with tongue diagnosis, we can liken the “ten questions” to conducting a good neurologic exam – once you get the exam pattern down and repeat it conscientiously, it soon becomes second nature. Rather than formally sitting down and asking all
ten at once, you can easily incorporate them into directed, focused conversation with the client as you are examining your patient.

Lastly, we’ll consider pulse examination and palpation. These are considered a single activity, but with two distinct methods. Pulse examination, like tongue diagnosis, is both an art and a science. Pulse-taking has been utilized in TCM since B.C.E., times; it was formalized as a science with publication of the *Mai Jing (Pulse Classic)* during the Western Jin Dynasty (circa 300). Its publication precedes the first monograph on tongue diagnosis, the *Ao Shi Shang Han Jin Jing Lu (Ao’s records of the Golden Mirror of Febrile Diseases)*, Yuan Dynasty, by nearly a thousand years. In our animal patients, we differ from the human patient custom of taking both radial artery pulses as well as pulses in an upper (head), middle (hand) and lower position (foot); we utilize just the femoral arteries instead. Some practitioners evaluate all three pulse positions at all three levels but most commonly, one position is used and is assessed at all three levels. Depending on the text utilized, one can draw various relationships between the pulse positions and the internal organs. Normally, pulses will vary with species, age, sex, utility of the patient, season, and other factors such as emotional status, food intake, and medications. However, pulses are highly patient-specific and thus changes over time in the same patient have great significance. While up to 37 different qualities can be assessed in the pulse, even the novice can quickly evaluate the following:

- Is the strength appropriate for the patient? Is the speed appropriate for the patient?
- Can the pulse be felt in all 3 depths (with light, medium, and heavy pressure over the artery?) Is the pulse regular/reflective of normal sinus arrhythmia? Is what you feel symmetrical? Do you feel anything weird when you feel the pulse?

Palpation, like pulse-taking is also an art and a science and fortunately, most veterinarians are quite skilled at palpation. In TCM, there are four aspects to palpation: light touch with the fingers or palm, “feeling” with slight pressure using the entire hand, pressing or firm pressure using the hand, and tapping or percussive activity to detect fluid accumulation or Qi stagnation. The entire body is palpated. Acupressure points are also palpated for heat, tenderness, stagnation, or accumulation. Diagnostic points such as association and alarm points are thought to be especially significant and reflective of specific organ dysfunction if they are found to be reactive or
abnormal upon palpation. They can also be used as an indicator of treatment success, since they will normalize with appropriate treatment.

Once the full exam is completed, the TCM practitioner uses the collected data to develop an impression of pattern identification. Some patients “fit” a specific pattern exactly, just as we sometimes see in western medicine. Commonly, however, a patient (especially the chronically and multiply diseased, polypharmic, geriatric patients we so often see in veterinary medicine), are a mishmash of presenting signs. We may be able to get no further that establishing the answers to four basic questions:

Is the location of the disease attacking the exterior (skin, muscles, hair, channels, vessel) or the interior (Organs, Qi, Blood, bone, Marrow) of the body? Is the disease a hot or a cold disease? Is the patient deficient or excess? Is the overall classification Yin (cold, interior, deficient) or Yang (hot, exterior, excess)?

If we can get this far, we are well along in establishing a diagnosis or at least how to proceed. But if we can’t get this far, we can use other TCM diagnostic systems that will still allow us to proceed. For example, if we can identify a specific external or internal causative pathogenic factor, we can use pattern differentiation specific to these factors. If we can identify a specific TCM Organ as being affected, we can utilize organ-specific pattern differentiation. If we can only decide that the disease is a hot or a cold-type disease, we can utilize diagnostic systems specific to each type. If we can get no further than determining a general region of the body that is affected, we can use Jiao-specific differentiation, choosing treatment options specific to the upper Jiao (HT, LU), middle Jiao (ST, SP, LIV), or lower Jiao (LIV, KI, SI, LI).

As long as one takes a careful history; examines the patient thoroughly, completing all parts of a good TCM and western exam; asks any necessary questions to clarify the case; and then looks for a pattern that fits the majority of the significant clinical signs, it is really quite difficult to go wrong. In teaching TCM herbal students when we go through actual cases at the hospital, a consistent finding is that no matter how varied the student’s diagnoses may be, they all come up with formulas of remarkably similar efficacy to recommend. Their formulas also usually match very closely the ones that the instructors always pre-selected and only reveal after the students have presented their diagnostic and therapeutic choices.
TCM Urinary Physiology

We all recognize the organs of the urinary system in western medicine, and we conveniently divide them into upper and lower urinary tract organs and related disease processes. The western system is simple, easy to understand, and straightforward to utilize. But it just doesn’t work for many of our patients. Try as we might to follow appropriate diagnostics and therapeutics, a given subset of patients simply won’t respond.

What if we revised our mindset to consider that we have failed the patient rather than insisting that the patient failed the correct treatment? We could begin to consider the possibility that we failed to correctly diagnose the underlying problem by oversimplifying the issues related to urinary tract disease. And if we begin to look at urinary tract disease from a TCM perspective, we’d see that there is scarcely a body organ that couldn’t be involved in diseases of this system, either directly or as a paired organ with another organ that is actively involved.

Urinary tract disease is truly a “three-Jiao”, full-body disease. Let’s look at potential organ issues alone:

Suspect #1: Spleen. The SP role in fluid metabolism, and separation of fluids into “pure” fluids that go to the LU and “impure” fluids that go through further digestive processes in the SI and LI before being shunted in one form to the BL makes this TCM organ a possible culprit. If the SP is somehow impeded or disrupted in its role in fluid and food metabolism, normal movement of fluids will be impaired, causing Dampness or Phlegm accumulation. This can be associated with a variety of urinary health challenges, including pain, dribbling, incontinence issues, and even renal failure.

Suspect #2: Lung: It is said that the LU oversees the body’s ‘water passages”, dispersing fluids to the skin and to the KI. When the lungs take in the Qi of the air, it must be “grasped” by the KI in order for both organs to function properly. If the LU is weak, descending Lu Qi won’t properly carry fluids down to the BL via the San Jiao/SJ. If the KI is weak, it can’t control its orifices properly. Issues such as incontinence and poor urine concentration can result.

Suspect #3: San Jiao: The SJ is the body’s highway system for fluids and other substances. When the SJ is disrupted in its role in water movement throughout the body, dampness will occur. Long term dampness accumulation thickens dampness into Phlegm. Think of a compost
pile – over time, it may heat up and even combust. Dampness and heat can be associated with pain, burning, abnormal urine patterns, and even urolithiasis formation.

Suspect #4: Intestines: The SI and LI, with “power” coming from KI Yang, separates the fluids coming to it from the ST, and decides what portion of the fluids goes to the colon and what goes to the BL. If impeded in this function, fluids will not move properly to the BL, and BL fluids can become turbid and thick, with eventual heat accumulation.

Suspect #5: Heart: Normally, the HT and KI enjoy a mutually beneficial relationship in which descending HT Yang warms the KI, allowing it to “steam” some of its Yin back up to the HT. This “steam” serves to cool and restrain the HT so it can act in a discerning manner to control the entire body in its relationship with the exterior world as well as with the interior of the body. If HT becomes overheated, its Yang does not descend, the KI become too cool, and incontinence can result. A hot HT can also cause vascular disruption, with hematuria as an end result.

Suspect #6: Bladder: The BL stores and excretes urine as we understand it to occur in western medicine, saving needed water for the body in the process. The BL also transforms some of the body fluids into Qi, which then helps to control the volume of fluid leaving the body. The BL carries out this transformative process with the help of other water and fluid-transforming Organs: SJ, LU, KI, and SI. When impeded in this function, the urine can become scanty, thick, and hot; or, polyuria with isosthenuria could result.

Suspect #7: Kidney: The KI role in urinary tract disease is far broader than how we understand it to be in western medicine. While adequate urine concentration in TCM is known to be a function of proper KI function, the role of the TCM KI is much more extensive. KI Yang provides the power to separate fluids in SI and LI, supports the Qi transformation of the BL, provides power to “steam” some of its Yin fluids back up to the HT to cool it and to the LU to moisten it, and powers the SP Yang functions of transformation and transportation. The KI also governs the lower orifices, ensuring continence. If the KI fails in any of these functions, a wide range of urinary disorders could result.

“Cystitis” Classic signs and symptoms of cystitis as we understand it in the western sense – stranguria, hematuria, bactiuria, pyuria, pollakiuria, urgency, and a thick bladder wall upon palpation - are readily apparent in most of our patients. If we broaden our understanding of cystitis to include the organ systems just discussed, a number of mental “clicks” happen. It be-
comes apparent that we very probably miss a wonderful opportunity to effectively diagnose and treat a wide range of health challenges before they manifest as a painful cystitis. Realization dawns that we definitely miss treating both overt cystitis and more subtle manifestations such as feline interstitial cystitis most effectively when we fail to address the underlying causative factors. A clear understanding that antibiotics are seldom the best answer develops. An understanding of the obvious link between chronic cystitis and diseases such as TCC emerges. And, we begin to realize that all those frustrating cases of overt cystitis symptoms with sterile urine have a recognized pathology which is easily treatable. Lastly, if we smugly elect to treat cystitis manifestations with herbs instead of antibiotics without addressing the underlying causes, are we really doing more of a service to our patients than the veterinarian who prescribed amoxicillin?

What we currently understand as cystitis would, in TCM, be viewed simply as a downward movement of damp and heat to the lower Jiao and then to the BL, causing painful, frequent, and urgent urination with odorous yellow urine accompanied by a burning sensation. (Other causes of TCM cystitis exist, but we’ll go with what you know). Several causes could be identified for this damp-heat movement. Regardless of cause, the damp-heat need not affect only the bladder. If it moved to other area organs instead, it could manifest as urgent, odorous, hot diarrhea accompanied by anal burning and possibly the passage of mucus or blood (LI); or as an odorous, thick, itchy vaginal discharge; or as a preputial discharge; or as a metritis or an orchitis. And in fact, similar seat-of-the-pants herbal therapies could be effectively employed for all of these conditions.

If we established a goal of addressing the underlying causes for the syndrome we call cystitis, we’d have to first look at acute onsets of damp-heat in the BL. Four or more forms, depending on source, can be identified.  

1. **Heat Lin or Re Lin disorder**: Re Lin is associated with acute classic cystitis signs plus dribbling, a red tongue, a rapid pulse and, if not treated quickly by draining the damp and clearing the heat, can become result in chronic inflammation. The urine is often very turbid and this form can be very painful. The appropriate classic formula is Ba Zheng Wan, and this is my preferred treatment, with possibly up to 10% Yan Hu Suo (Corydalin) added if pain is substantial, or up to 10% Fu Ling if dampness predominates. Other formulas that have been advocated are Ba-zheng
Powder (Xie, hardly a change from the classic formula), or San Ren Tang and Si Miao San* (Marsden). Appropriate acupuncture strategies to clear the heat and drain the damp are those advocated by Marsden (SP 9, LI 11, He-Sea points; BL 25, empirical; BL 27, BL She point) and Limehouse (BL 22,28; CV 3,12; SP 6,9). Any acupuncture text will list other points to consider.

2. *Stagnation Lin or Qi Lin disorder:* Qi Lin represents LIV Qi stagnation, which often occurs in association with stress (I see it in agility and show dogs as well as in many cats maintained in isolated or very cat-unfriendly environments), or in conjunction with LIV Blood deficiency (carb-loaded pets, for example). Wood type animal personalities are commonly affected. The stagnancy creates more symptoms of abdominal tenseness and irritability and less damp symptoms than seen in other forms of Lin disorders. The tongue is often lavender to purple, pulses are more wiry. Herbal strategies to calm the LIV, clear the heat, and move the Qi include Wu Yao Tang, Si Miao San, or Long Dan Xie Gan Tang (if there is a lot of LIV heat). Appropriate acupuncture points include those advocated by Limehouse (PC 6, ST 30, LIV 3,5,6,8, CV3, 5) and Marsden (BL 18, LIV-Shu; BL 27, BL Shu; LIV 8, He-Sea point; SP 6, LJ Qi mover; ST 37, Sea of Blood).

3. *Heart Fire:* HT fire usually represents an Upper Jiao heat excess; multiple causalities exist. Regardless of the cause; when the HT is too hot, it affects not only the Shen, Blood, and nearby structures such as LU, but organs with which it has a close association, such as KI and its paired organ, SI. Marsden has made the observation that both HT and SI are organs of discernment; the HT discerns to engage appropriately with the external world, ruling how the body reacts to the external, and the SI discerns to engage appropriately with its internal world of separating turbid from clear. When either function fails, normal discernment fails. The organism as a whole becomes flighty, anxious, and easily agitated, and the SI fails to separate appropriately, resulting in less fluid being passed to BL. The HT-SI association also gives us another important diagnostic and prognostic clue that the HT needs treatment, not just the BL: affected animals, usually cats, often will resolve symptomatically and then, later, begin exhibiting inappropriate urination behavior. Untreated, they will also usually relapse with overt cystitis signs, with or without bactiuria. HT Fire is a frequent cause of owner give-ups and unnecessary euthanasia in feline patients. The urine is not only scanty; it heats up and actually feels hot when collected. The tongue is red with a redder tip (why?), the pulse is quite rapid, and other cystitis signs are as previously described;
hematuria usually predominates. Herbal strategies to relieve both clinical signs and the HT Fire, include LDXGT, SMS, and Dao Chi San (Guide Out the Red Powder), which specifically conducts heat out of the HT channel via the SI. This formula is effective for both excess and deficiency types of heat. Appropriate acupuncture points include classic points for cystitis as well as points to calm the Shen, including PC6, the HT and PC association points, GV 20 to descend the Yang, and ST 39, lower He-Sea of SI.

4. Deficiency Fire: Debilitated, geriatric patients often suffer from deficient Blood, Yin, or both. When Yin, the body’s fluid nature, is deficient, Yang is relatively excess. This causes a relative heat condition, not truly excess in nature, but “hot” all the same. Just as one can get burned by holding a hand over both a low and a high gas flame on the stove, deficiency Fire can dry up the body’s fluids, including the urine. The urine becomes thick, scanty, hot, and often cloudy. The condition is often not painful, and the BL may not be thick upon palpation; the body is reduced in its ability to respond. The tongue is red, dry, thin and possibly small, pulses are rapid and weak and/or thin; and the patient generally appears thin and weak, and possibly quite jittery or agitated. Many startle easily or are quite vocal but with a soft voice. Many present with concomitant CRF. Treatment choices must be focused on nourishing the Yin and gently clearing heat. Appropriate herbal formulas are Zhi Bai Di Huang Wan or Liu Wei Di Huang Wan (Xie). The former is a variation on the latter, with two herbs added to make it much more specific for clearing vigorous Fire. ZBDHW is my first choice, as few of these patients present in an early enough stage for the latter to be very useful. Marsden’s acupuncture prescriptions for fulfilling the stated therapeutic goals include the KI Fire and source points (KI 2, 3); BL 23, the KI association point; SP 6, intersecting point of the 3 leg Yin channels, and locally, CV 3.

An important reality check is the realization that many of these acute heat, damp-heat, and Fire patients are quite difficult to needle. Treating an angry, very painful, or very anxious and flighty patient via needling can be a real morning waker-upper. Instead, I will commonly go straight to herbs, or, since I practice integratively, will employ another pain-relieving strategy. Homotoxicology offers wonderful benefits to acute and chronic cystitis patients and, with the use of autosanguis preparations either orally or injected into just one or two acupuncture point with a 30 gauge needle, provides rapid relief of pain and inflammation. The role of chiropractic subluxations should not be ignored; inappropriate sympathetic or parasympathetic stimulation of the
bladder or to an organ involved in proper water metabolism, secondary to a subluxation, is a frequently neglected cause of recurrent acute cystitis. The utility of ozone therapy is documented in treating cystitis pain, and it is easy to deliver ozone to the lower Jiao via rectal or vaginal insufflation. QGM machines and other infrasonic devices provide fast pain relief and a strong calming benefit. While not effective acutely, the beneficial effects of joint support products such as ArthriEase and Cosequin in cases of recurrent cystitis are documented. And the use of some of the newer injectable NSAIDs, such as meloxicam, and newer non-narcotic pain relievers, such as Tramadol, certainly have their place in initial therapy for some patients.

Chronic causes for cystitis-type syndromes generally represent inadequate treatment of an acute form of cystitis, such as Re Lin or Qi Lin. These can transform into Xue Lin disorder or secondary Blood stasis. Once Blood stasis develops movement of Qi, fluids and (obviously) Blood slows, nutrition to the BL becomes inadequate, toxins cannot be adequately removed, and entanglements of Qi, Blood, and Phlegm can develop. The bladder wall appears thick and engorged to necrotic-looking; in very severe forms of Xue Lin, tumors may develop. Severe interstitial cystitis is one form of Xue Lin; transitional cell carcinoma is another. The tongue is generally red with a yellow coat; the pulse is rapid; the bladder is extremely thick, painful, and friable; hematuria is prominent. In Xue Lin, an important treatment goal is to get the Blood moving; yet if entanglement is present, we must clear this first. Blood cannot move effectively against an obstruction, and forcing it to do so will worsen the patient and cause excruciating pain. This is one form of cystitis where I would turn to homotoxicology before going to herbal therapy, because I have found the matrix-clearing benefits of appropriate homotox remedies to be a better first-treatment step. Once the matrix – the framework through which the static buildup will have to pass – is clear, I will then turn to appropriate TCM herbal remedies. Appropriate homotox remedies in this case are best prepared as an autosanguis and delivered via aquapuncture into points such as BL 17 and 27, the association points for Blood and BL respectively, or if the patient’s pain state permits, LI 11 and SP 6 (to help clear the matrix; however, these are usually much more painful). Once the matrix is cleared, one can either continue with adjusted homotox remedies orally or in combinations of oral and aquapuncture therapy. Or, one might go to herbal therapy. An appropriate herbal formula would be the lower Jiao-specific variant of Xue Fu Zhu Yu Tang (Drive out Stasis in the Mansion of Blood Decoction), which treats dysfunc-
tions with the commonality of Blood stasis. This is Shao Fu Zhu Yu Tang (Drive Out Stasis in the Lower Abdomen Decoction), which is specific for Blood stasis disorders of the reproductive system, the lower back, and the lower abdomen, with or without palpable masses. I often add Yan Hu Suo for its Blood invigorating and stasis-removing (profound analgesic, anti-inflammatory, muscle relaxing, and pain-relieving) effects. For those who don’t keep single herbs in stock, good effect can be achieved by adding a second formula that is Yan Hu Suo based. Two very nice such formulas are Evergreen’s Corydalin formula and Dr. Zhao’s Corydalis Compound. Evergreen’s Herbal Analgesic capsules, a Dr. Richard Tan formula, also work very well for this and any other situation in which substantial pain is present. Any of the other herbal companies present at this conference can likely show you formulas of similar derivation – take advantage of their presence and talk to them all!

There are also several different forms of cystitis-like syndromes recognized in TCM for which western medicine has no name. These are Shi Lin, Gao Lin, and Lao Lin. 

Shi Lin: Sometimes called Stone Lin, this form is characterized by classic cystitis signs, plus crystalluria that can progress to stone formation with resultant urinary obstruction. The tongue is red with a yellow coat which may be thick and sticky, and the pulse is rapid and wiry. Crystals and stones represent a more extreme form of dampness accumulation, with transformation into Phlegm and eventually into a more solid form. Appropriate treatment seeks to clear Heat, drain damp, and open the water passages so that the stones or crystals can be expelled. A formula that is sometimes useful is Allen and Boudreaux’s proprietary Stone Qi Formula. I have seen this formula resolve crystalluria rapidly (MAP crystalluria responds much faster than calcium oxylate crystalluria; the makers claim to have seen MAP stones dissolve, but I have not seen this happen, preferring to take seriously affected patients to surgery before they obstruct). Acupuncture points suitable for BL damp-heat conditions would certainly be appropriate, plus BL 63 to remove obstructions from the BL channel, and BL 39 with KI 2, to remove obstructions from BL and free the water passages.

Gao Lin: Also called Turbid Lin or Cloudy Lin, cystitis of this type exhibits lots of thick, turbid urine, with mucus or clumps of pale to white debris in the urine. Microscopically, these clumps have appeared amorphous when I have looked at them. In the excess type of this pattern, the urine may grow organisms when cultured; in the deficiency form, it is usually sterile. Excess
patients have a damp-heat type tongue and pulse and exhibit similar damp-heat signs. Deficient patients usually appear tired, thin, show a pale tongue with or without a coat and a weak pulse, and may have substantial lower back pain. Any good damp-heat formula we have discussed would be appropriate for excess patients. Deficient patients are often treated like Lao Lin patients (below) or with a specific and somewhat difficult to find formula, Gao Lin Tang (Cloudy-Painful Urine Decoction). Acupuncture protocols are similar to those for damp heat (excess form) and Lao Lin (deficiency form).

Lao Lin: Also called Fatigue Lin or Deficiency Lin, representing chronic disease with a KI Yang deficiency. When Yang is deficient, the patient is cold, weak, and shows more signs of dribbling than with other forms of cystitis syndromes. All signs are worse after exertion. The tongue is pale and sometimes flabby, and the pulse is weak. Treatment goals are to tonify the Qi and KI, raise the Yang, and warm the body. An excellent formula is Bu Zhong Yi Qi Tang* (Tonify the Middle and Ascend the Qi Decoction), the classic Qi tonic formula for raising and strengthening the Yang. Acupuncture protocols might include the use of moxa over points such as GV 4 to strengthen KI’s Fire of the Gate of Vitality.

“Incontinence” Incontinence is sometimes frustrating to treat because western medicine has such a poor understanding of the causative factors. It is truly a crapshoot with respect to deciding upon appropriate therapy, even according to the experts in the field. TCM recognizes many syndromes, and no two reference sources agree exactly how to differentiate incontinence from enuresis; some do not differentiate them at all. For reasons of time constraint, we’ll discuss the top four that Marsden presents in his IVAS lectures, as they encompass many of the types others differentiate individually while introducing some that may be more specific to our animal patients: obstruction of the Dai Mai channel, KI deficiency, HT-KI disconnect syndrome, and urgency from damp heat accumulation syndromes.

Dai Mai obstruction: We’ve discussed the location of the Dai Mai – now picture this channel as a belt that is too tight, constricting what is under it, and obstructing the flow on either side of it. When stasis occurs in this or any other channel, flow of Qi and Blood is obstructed. Specific to the Dai Mai, KI Jing also “leaks”, as does urine. This syndrome can also be associated with pain, weakness, or paresis of the lower back and hind limbs. Regulating the Dai Mai with appropriate acupuncture technique (GB 41, master point, SJ 5, coupling point, and GB 26-28, local points;
after Marsden) facilitates a response that can be surprisingly quick. Marsden’s suggested formula is Xiao Chai Hu Tang (Lesser Bupleurum Decoction), classically a formula that harmonizes “half interior, half exterior” or lesser Yang/Shao yang disorders, to speed their resolution. This pattern is generally caused by an environmental EPF that attacks the body and disrupts the normal dispersing function of GB. It is marked by alternating attacks of chills and fever (fever when the vital Qi dominates, chills when the EPF is stronger and dominates). The EPF-vital Qi interaction occurs in the area between the interior and exterior of the body, and so results in stagnation of not just the Shaoyang but also the Jueyin channel, which has an interior-exterior relationship with Shaoyang. What does this have to do with Dai Mai obstruction? Clinically, the use of this formula expanded during the Eastern Han Dynasty (c. 24-220 A.D.) to include use in any patient with injury from wind or cold, whether or not they had passed through Taiyang and Yangming stages first. Since that time, use has expanded even further to include a wide variety of “look-alike” presentations which may not have passed through the stages of an externally contracted disorder at all. Today it is used for such diverse conditions as acute viral hepatitis, acute pyelonephritis, cholecystitis, lymphadenitis, malaria and other waxing/waning fever conditions – and Dai Mai obstruction. Recall that if an actual Shaoyang syndrome is present, the patient will recover by passing back through Yangming and Taiyang before the EPF is successfully cleared – and fever and chills may return during the clearing. If this is too complicated to consider – I have had good success with Neuro Plus, an Evergreen specialty formula developed by Drs. Chen and Tan, plus electroacupuncture above and below Dai Mai.

KI deficiency: Deficiencies of any KI vital substance will cause dysfunction and inability to control the urine. We’ve already discussed syndromes associated with deficiencies of KI Yin; here we’ll consider KI Yang deficiency. In addition to the signs discussed under Lao Lin syndrome, incontinence-specific KI Yang deficiency is associated with a need for frequent urination at night (why?) and feelings of exhaustion and dizziness (why dizziness?). Geriatric pets may present with symptoms of cognitive disorder more than dizziness, which is hard to assess in our patients. I have had a number of cases reported of pets who circle rooms, only at night, by leaning against one wall – perhaps this represents a dizziness manifestation. The treatment goals and protocols discussed under Lao Lin syndrome are appropriate here, too. If the deficiency is associated with a great deal of lumbar and hind limb pain, I will add either Qi Bao Mei Ran Dan or
Du Huo Ji Sheng Tang – both will effectively improve comfort, warm the lower back and hind limbs, and improve Blood and Qi flow to deficient areas. Yan Hu Suo* is another consideration, for reasons previously discussed. I was taught to use Jin Gui Shen Qi Wan (Golden Cabinet Kidney Qi Pill) but find that Tu Si Zi Wan (Cuscuta Seed Pill) is more effective (maybe I see a more decrepit patient population than some). The former works well so long as there is not a tremendous discrepancy between KI Yin and Yang, since it both nourishes Yin and tonifies Yang. The latter is excellent for those patients who are severely deficient to the point of being alarmingly frail and constantly dripping urine (source Qi can no longer fill out the skin and flesh or distribute the Blood and Qi well).

HT-KI disconnect: This is an extremely interesting syndrome similar, in some ways, to the mutual relationship between HT and SI. Here, however, the relationship is between the HT and KI – the two rulers, if you will, of the most essential aspects of body physiology. When the KI and HT fail to support each other, the HT does not warm the KI and the KI does not send up its Yin to cool the HT. The HT Yang flares into HT Fire, and the KI becomes too damp, resulting in incontinence. Treatment protocols center upon acupuncture to facilitate descending the HT Yang, and use of formulas that stabilize the KI. I was taught that Jin Suo Gu Jing Wan (Lock the Essence Pill) was the best choice for this condition, and it does work well in my hands. Others prefer Sang Piao Xiao San (Mantis Egg-Case Powder).

“Renal Failure” Renal failure is viewed as having both acute and chronic manifestations in western medicine, with vastly differing presenting signs, symptomatology, and prognoses. TCM views renal failure as a chronic condition, albeit a treatable condition. Many causes exist, but the main ones center upon SP deficiency, KI Yin deficiency, and KI Yang deficiency.

SP deficiency: This more reflects renal insufficiency than renal failure; most SP deficient patients with KI manifestations appear reasonably well. They are isosthenuric, but remain well hydrated, generally mildly polyuric and polydypsic, and their bloods show only mild elevations in BUN and creatinine. However, they are patients who are walking a thin line, because their KI essence is not able to properly support KI Yin and Yang – and without this, there is poor interaction between the two to “spark” the production of KI Qi. Treatment goals are to tonify the SP and ST so that these Organs remain strong and able to resist invasions of cold and damp that can affect the KI and related organs of water metabolism, and to promote normalization of SP trans-
portation and transformation processes so that normal KI function is supported. Tongue, pulse, and appropriate treatment strategies have been discussed.

KI Yin deficiency: Untreated, mild KI Yin deficiency will eventually progress to HT Fire and gradual “top dry, bottom wet” disconnect. The upper portions of the body, under the influence of a too-dry and hot HT, “heat up”, cause agitation, nocturnal restlessness, increased thirst, a dry coat, weight loss, and general feelings of heat and a desire to select cool surfaces on which to rest. At the same time, the KI Yang cools and sinks, causing polyuria and dampness-obstructive symptoms in the lower Jiao, lumbar area, and hind legs. The patient is weak, painful, and often constipated with a red dry tongue, a rapid pulse, and a feeble appearance that can be masked by agitated activity. Treatment goals are to tonify Yin, cool the HT, and descend HT Yang to warm the KI. Treatment protocols appropriate for deficiency Fire are appropriate here. If mental agitation is severe, calming formulas such as Tian Wan Bu Xian Dan (Emperor of Heaven Pill to Tonify Heart), or Evergreen’s Calm ES are useful add-ons. I would not use Calm ES alone, however. While both formulas have strong Shen-calming effects, Calm ES, does not possess the slight Yin-tonifying qualities of TWBXD. If constipation is severe, use Run Chang Wan.

KI Yang deficiency: If the KI Yang is weak, the same scenario as above occurs. This time, Yang deficiency signs predominate, with a more static tongue, a weak and deep pulse, and more dampness signs. The end result, of course, will be the same without treatment – Yin and Yang will increasingly separate, and the patient will die. Appropriate treatment goals and protocols are as discussed, with more effort to tonify the KI (BL 23, KI 3, GV 4). The best herbal protocol for patients with this stage of dysfunction is, fortunately, the pleasant tasting tonic formula, Ba Wei Di Huang Wan. Another good choice is Jin Gui Shen Qi Wan.
References


Are Equine Ulcers the Disease Du Jour – Or Are We Seeing the Tip of an Iceberg?
Kerry J. Ridgway, DVM, CVA
Equine Therapeutic Options & Equine Wellness Institute
Aiken, SC 29805

The goal of this presentation is to review what we currently know about ulcers and to present a totally “holistic” and non-invasive accurate way of diagnosing ulcers in the digestive tract.

GI ulcers are certainly more than just the latest “disease du jour.” Thus far, for a problem that has been recognized for about 10 years, we are still seeing and understanding only the tip of a metaphorical iceberg. More than two thirds of the iceberg is still not visible and much is still being discovered about this ulcer “iceberg.” We do know, even at this point, that there are, basically, only two kinds of horses – those who have ulcers and those who will have ulcers!

Since we have only some ten years ago, started recognizing that ulcers are a significant problem our knowledge is still limited. We are still learning and seeing the problem in more depth. What I, as a rider and clinician am now recognizing is that through the years we have unknowingly condemned hundreds of thousands of horses to the “trash heap. We simply had not known that so many “hard keeping horses,” “bad disposition horses,” “poor performing horses” were suffering from gastrointestinal tract ulcers. Looking back, some dispositional issues were so severe that afflicted horses could be dangerous to handle and show severe aggression. The sad truth is, with what we do know at this point, is that many - many horses are still being unnecessarily condemned for these very same reasons. If we had simply known how to diagnose and how to deal with ulcers, many foals that died of ulcers and otherwise “discarded” adult horses could have been top horses. Daily in my practice, I see horses that were normally mellow and easy to work with become nervous, become agitated or even outright aggressive, and loose their performance ability.

The Equine Gastric Ulcer Syndrome –EGUS (Andrews et al., 1999) has become the “disease of the year.” So much about the syndrome is still unknown or unrecognized, so the true incidence and ramifications may be significantly higher than previously realized. It is practically unfeasible to scope every suspect ulcer case. There are few effective medical treatments available. In the allopathic realm, so much of both available diagnosis and available treatment is very expensive.
As a strong advocate for the need of a more integrative medicine approach, the author encourages practitioners to appreciate and accommodate the best of allopathic medicine integrated with the best of beneficial complementary modalities and systems. To that end, this paper seeks to discuss the use of acupuncture point reactivity as a very strong indicator of inflammatory and ulcerative pathology in the GI tract for both fore and hindgut ulcer problems. Acupuncture can also play a role in therapy and like any therapy must be combined with good management counseling.

**Incidence of Gastric and Colonic Ulcers.** Gastric ulcers in various studies have shown 90 – 95% of racehorses are afflicted (Murray, 96 – 2000 and Vatistas 1999). In studies of performance and show horses the percentages range from 30 to 70%, including dressage horses at about 40% (McClure et al 199, Mitchell 2001), endurance 65 -67% (Nieto et al, 2004) and western performance 40% (Bertone, 2000). It is important to emphasize that these percentages do not reflect what is occurring in the rest of the GI tract. It is known that ulceration also occurs in the small intestine and the large bowel. In a retrospective necroscopic study of 545 horses, 44% of non-performance and 65% of performance horses had colonic ulcers (Right Dorsal Colitis – RDC).

**Causal Factors:** Ulcers have to be considered an iatrogenic/human created problem. This author has always contended that stalls are one of the great injustices to which we have subjected the horse. Now we know that stall confinement alone can lead to ulcer development, sometimes in as little as 24 hours. Typically, accompanying stall confinement are twice daily feedings that often involve high grain rations. It is known that horses continue to secrete acid regardless of whether they are eating or not eating. The stomach secretes from 4 to 60 mmoles of hydrochloric acid per hour in the 1.5 liters of acid produced hourly. Twice daily feeding means that there is a prolonged period of time in which there is no feed in the stomach to utilize the acid. High grain intakes produce volatile fatty acids that also contribute to acid erosion of the stomach lining.

Another key factor for ulcer formation is the frequent administration of non-steroidal anti-inflammatory agents (NSAIDs) such as phenylbutasone and flunixin meglumine (Banamine), as well as the steroid, dexamethasone; all decrease the production of a protective mucous layer in the glandular part of the stomach. NSAIDs play a large role in hindgut ulcers as well as in the glandular portion of the stomach.
Training intensity can be a major factor in ulcer development. The pH of the stomach is lowered with intense training or competition, as for example in endurance, racing, combined driving, or three day event training and competition. Unknown factors during exercise relate to gastric collapse and the "spilling" of acid on the non-glandular squamous portion of the stomach. Intense exercise decreases motility and delays gastric emptying. Exercise intensity or related stress can also increase ACTH output; thereby increasing endogenous steroid production.

The routine need for high levels of electrolyte supplementation in endurance and occasionally in event horses during the speed and endurance phases and electrolyte use during the marathon phase in combined driving may pose an added risk of ulcer formation. (Holcomb et al. AERC presentation 2007)

**TWELVE GOOD REASONS TO UNDERSTAND GI ULCERS IN HORSES:**

1. Ulcers increase the risk to the horse's health, safety and welfare (a horse in pain is more prone to falls and injuries)
2. Ulcers increase the risk to the rider's safety and welfare
3. Ulcers cause loss of performance and competitive edge
4. Ulcers can upset or interrupt an entire competition schedule
5. Ulcers are very expensive to treat and to resolve – recurrence is common
6. Ulcers cause many “behavioral” problems
7. Ulcers set up many muscle, myofascial and chiropractic issues
8. Ulcers increase risk of injury and lameness as a result of the point above seven
9. Ulcers increase the risk of colic and diarrhea problems
10. Ulcer stress may deplete the immune system and make a horse more susceptible to disease
11. Ulcers often create “hard keepers” and cause weight loss. The result – an unthrifty horse. (However, some horses with excellent weight also have ulcers)
12. Toxins released from altered gut flora increase a risk of laminitis/founder

*Signs and Symptoms.* Clinical signs vary with the location of the ulceration and the severity of the lesions.

Signs that should alert the owner or clinician of EGUS or Colonic Ulcer Syndrome include:
• Behavioral changes such as resistance, “grouchy” aggressive, depressed or nervous.
• Do not like to be groomed or brushed along the ventral midline
• Slow eating – especially grain… may leave some feed.
• Moderate loss of weight (not more than 10% of body weight) even with increased grain, etc.
• Hair coat may be dull – especially over thorax
• Poor appetite
• Salivation or teeth grinding
• Intermittent low grade chronic diarrhea
• Mild to overt colic after eating or transportation stress
• * Very important to note: many horses with none of the above signs may still have serious ulcer problems

**DIAGNOSIS – CONVENTIONAL MEDICINE**

It is considered that gastroscopy is the only accepted means of diagnosing EGUS. It should be noted that **most insurance companies won’t accept a diagnosis of EGUS unless it is verified by gastroscopy.** As a result in order to visualize the proximal duodenum as well as the entire glandular area of the stomach it requires very expensive endoscopic equipment. It requires a three-meter long video endoscope. Foals may be examined with a 2-meter scope.

For adequate inspection, the stomach must, obviously, be empty. This requires a 12-hour fast and no water intake for two to three hours prior to endoscopy. Sedation is required. The limitations are the deleterious aspects of the required fast, the sedation requirements and the prerequisite skill and knowledge of the veterinarian. A horse that has minor ulcers may have more severe ulcers after the fast. A horse with severe ulcers may result in bleeding ulcers or a potential colic. Another limiting factor of endoscopy exists - it obviously cannot be used to diagnose ulcers beyond the proximal duodenum and is no value in hindgut ulceration detection.

What is sorely needed is a non-invasive, inexpensive, yet reliable way of diagnosing equine ulcers – a severe inflammatory disease well suited to TCM diagnosis. I strongly believe that is available right in front of us.
Acupuncture “reflex point” Evaluation for EGUS. For the past two years, the author has been tracking cases of EGUS by evaluating the reactivity of a number of acupuncture points on the thorax and abdomen. This is followed by treatment of “command points” on the limbs. The “diagnosis” is considered positive if the previously tested points become non-reactive.

In addition to a group of very consistently reactive acupuncture points, there is an overall consistent pattern of “body” issues that will be found in every case of ulcers. The body issues are myofascial and muscle pain patterns, and chiropractic patterns. It is then these body patterns that create so many of the performance limitations and the so-called bad “behavioral” responses. These horses are simply in a lot of pain and their responses are consistent with a prey species animal’s fright, flight and aggression nature when restrained.

Starting with an observation of movement, it will be noted that they move with stiffness in the shoulders and pelvic area. The shoulders tend to rotate inward with each stride instead of a normal lifting and extension. The movement is more “shuffling.” If one observes the descending pectoral muscles (at walk and trot) they appear to roll inward with each stride rather than in a normal up and down motion.

Upon palpation, there is nearly always hyper-reactivity and pain to pressure (such as the flat side of a needle cap) when stroked from the mid-neck portion of the Brachiocephalicus muscle down to the base of the neck along the Stomach Meridian. This reactivity extends from cranial to ST-10 to ST-11 or even further along the meridian. As a first indicator of an ulcer problem, the reactivity must be bilateral and essentially of the same magnitude bilaterally. Unilateral reactivity is more likely associated with a chiropractic problem. When associated with ulcers, each successive stroke magnifies the fasciculation reaction.

The second area of the palpation procedure involves a stroking action over the top edge of the scapula with firm fingertip pressure being applied into the Rhomboid muscles. The stroke is carried along the caudal edge of the scapula through BL-13 and BL-42 and from there diagonally caudo-dorsally to the thoraco-lumbar junction. Usually a marked fasciculation response is noted that is related to pain/tension and trigger points in the myofascia. It is important to do the first stroke gently and then with a firmer pressure. Some horses nearly drop to the ground even with light pressure. If a needle cap or blunt end of a ballpoint pen is used, do so quite gently –
fingertip pressure is usually enough. This finding will also be bilateral. (Note: Occasionally this response can occur from causes other than ulcers.)

A downward stroking pressure from the spinous processes to the costal arch reacts and exhibits pain and a fasciculation response in the “wither pocket” muscles, i.e. the Trapezius and Semispinalis muscles. The response will be bilateral and often continues ventrally/distally with fasciculation exhibited in the Long Head of the Triceps muscle.

The Psoas muscles are the key stabilizing muscles for the pelvis. The myofascial patterns described above, via fascial connections, trigger an over-reactivity and contraction of this group of muscles. Hypertonicity of the Psoas Major and Minor sets up the articular dysfunction resulting in pain and fixation in the Sacro-pelvic articulations. Especially the Sacro-Iliac joint and the Intertransverse joint at the lumbosacral articulation are affected. The resulting joint dysfunction then sets up muscle tension and spasms in the large propulsion muscles of the croup, such as the Middle gluteals, Superficial gluteals, Biceps femoris mm. and sometimes the Semitendonosus and Semimembranosus muscles.

The sacral apex is reactive when traction is applied horizontally both to the left and to the right. The right S/I joint and the right sacral apex are usually more reactive than on the left side. When direct downward/ventral pressure is applied at the costal arch over the 16th, 17th and 18th ribs, pain and fasciculation extending forward to the wither pocket is observed. This relates to the Psoas Major’s origin under the last three thoracic transverse processes.

The Psoas Minor sets up pain along the paraspinal muscles, particularly from about T-17 through L-5 and also affects the sacro-pelvic articulations. The large Latissimus dorsi muscle is bilaterally involved and when in a state of contraction/hypertonicity, they essentially limit vertebral joint motion resulting in fixation pathology at L-1 and L-2 and sometimes T1-18 and L-3 as well. Bilateral Latissimus tension significantly accounts for the tightness and lack of freedom of the shoulders.

Extensive chiropractic issues arise in the upper thoracic vertebrae as a result of the myofascial-neuromuscular tension. The partial and more complete fixations are to a certain extent bilateral, but are usually more acute and painful on the horse’s right side.

(Appropriate treatment for these lesions is discussed in the author’s other presentation “Enhance Your Practice with the Synergy of Acupuncture Plus Chiropractic”)

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An acutely “sore back” from the withers to the croup is often the chief complaint that causes the client to call for an appointment rather than because the client suspects an ulcer problem.

**Indicator Points FOR Gi Inflammatory Conditions Gastro-Intestinal Ulcers.** The author’s preference is to use the tip of a needle cap to evaluate the level of reactivity of the points. The flat side of a needle cap is also used to apply pressure to ascertain muscle and myofascial sensitivity. The key is to apply an appropriately consistent pressure on all points tested. *With excess pressure any point will react.*

The first “ulcer indicator” is marked reactivity in the distal third of the Brachiocephalicus muscle. Along its ventral border lies the Stomach Meridian. A sharp fasciculation response or spasm is found bilaterally when EGUS exists. If the response is unilateral there are more likely chiropractic issues or a muscle issue. If that area (region of ST-10, 11) is found to be reactive, check BL-20 and BL-21, the Back Shu Points for Spleen and Stomach. If these are also reactive, proceed to LIV-13, the “alarm point” for the Spleen.

Then proceed to check the Stomach “alarm point” CV-14, and the Large Intestine “alarm point,” ST-25. If ST-25 is reactive, include evaluation of BL-25 and BL-27 – Back Shu points for the Large Intestine and the Small Intestine. By evaluating points related to Small and Large Intestine, ulcers sites in those segments should be considered. *Caution and a safe position are imperative when testing ST-25 for reactivity.*

*Each point tested should show approximately the same degree of reactivity bilaterally if in fact they are bilateral points.* If points are only unilaterally reactive, consider the “diagnosis” to be suspect and inconclusive.

“Diagnosis” cannot stop with just the above information. The next step is to treat command points on the limbs to see if all points (and perhaps the aforementioned body soreness issues) are ameliorated. Many of the cases with EGUS that the author has worked on are young horses in race training, and that entails concern for my safety and welfare. They are often not amenable to needle acupuncture of the limbs – especially medial aspects of the hind limbs. Fortunately, low-level laser or LED units (photonic therapy units) work very well and can be more safely applied than needles.
Points Treated For Confirmation of a Presumptive Diagnosis of EGUS. For the sake of brevity, the action and reasons for the use of each point will not be covered in this paper. The author refers the reader to any good acupuncture text. The points listed are a “cookbook” formula and can certainly be modified and/or enhanced for specific cases – especially if acupuncture is chosen as a therapeutic modality.

Master Points for “diagnostic” treatment:
- ST-36
- SP-6
- LI-4
- PC-6

Other useful points for “diagnostic” treatment
- SP-4
- GB-34
- LIV-2
- LI-11

In fractious horses, Photonic stimulation of PC-6 as the first point treated will often make the rest of the task easier. If a good response is elicited, the case for acupuncture “diagnosis is enhanced and a very strong presumptive diagnosis is achieved.

If desired one can then decide to use conventional allopathic drug therapy to further prove the diagnosis and resolve the case (or resort to endoscopy for confirmation). Confirmative correlation with cases that have received response to medication (Omeprazole) has been approximately 85%. If it is feasible to see the patient on a regular basis for follow-up acupuncture (for four to six treatments) good results can be achieved. Often the client can be taught to monitor the indicator points. Thereby, they can monitor progress during ongoing therapy or be aware of the recurrence of ulcers. For initial healing (in conjunction with acupuncture), therapeutic doses of brand name omeprazole (GastroGard or UlcerGard) can be very helpful. Be aware that most generic omeprazole products have limited effectiveness.

It has been nothing short of amazing to see that after the acupuncture is performed as part of the diagnostic protocol – (a simple acupuncture treatment that will be described shortly) - the test points are no longer reactive and the “body work issues” either quickly resolve, or at least, are ameliorated.
without performing any direct or specific bodywork. Further bodywork, chiropractic and acupuncture may, and certainly should, be performed to enhance resolution and improve the well being of the horse. It is also noteworthy that chronic body pain is a stressor and may be a factor in ulcer production. Thus, a cycle is created that feeds upon itself to worsen the condition.

The points used for “diagnosis” can also indicate whether there is inflammatory response in the hindgut and/or small intestine. Another key point worthy of emphasis is that the discovery of these musculo/myofascial and “bodywork issues should create awareness that EGUS needs to be ruled out.

Environmental and Management Considerations. No treatment can be successful, long term, without addressing the environmental and human induced causes. Those involved in holistic forms of medicine certainly recognize the need to treat the “root.”

We have taken a nomadic herbivore evolved to graze as much 20 hours a day (often on low quality forage) and placed him in confinement and bulked him up with “high quality” hay and massive quantities of grain that he would never have seen in his more natural state.

Consider that the “high quality forage” that we feed is really designed to fatten cattle or increase milk production and not the “lower quality” of forage that nature designed the horse to eat. Perhaps we should answer the question, “Are we feeding the horse to eat or produce more milk?” Adding insult to injury, we don’t even allow the horse to eat and cover significant distance over the 18 – 20 hour grazing period for which nature designed it. Instead we add to the horse’s stress by confinement in a stall or small area and feed twice, or if he is lucky and we are good managers, we feed three times a day. Often horses are alone, or out of sight of his companions – totally against its nature as a herd animal.

But we are not through yet. We transport them to strange locations, often over long distances, often without the companionship of horses that they know, change the water that they are used to, perhaps change the forage from what is fed at home and again confine them in a very small box stalls, or tie them to a trailer for long hours at a time.

We cannot be so naïve as to suggest that we are going to suddenly change everything in our management and use of the horse. That is a fact of life and so are the consequent ulcers. However, it is possible with common sense to find ways to mitigate the environmental stresses, feeding, and many management aspects.
We need to review a bit of our basic anatomy with regard to the horse’s digestive tract and a bit of the physiology of how horses digest food. This will help us develop common sense answers. It will also help us to understand what types of medicines and nutritional factors we can use to treat ulcers and prevent recurrences.

Recall that if the entire digestive tract were to be laid out in a straight line, it would be a full city block long. The stomach portion is one of the smallest aspects and can only hold two to a maximum of four gallons of material at a given time. This means that with the large amount of food a horse consumes in a day, the stomach must pretty rapidly process the food and move it on into the small intestine and from there into the large bowel. So – in relationship to stomach ulcers - the key point is that the stomach is geared to eating small amounts on a nearly continuous basis and not large amounts two or three times a day. The emphasis must be placed on the fact that the horse evolved as a grazing animal.

Add to this the fact that the glandular portion (in the lower part) of the stomach secretes well over a quart and a half of hydrochloric acid every hour on a 24/7 basis whether food is present or not. If no food is present for long periods, the acid can literally start digesting the lining of the stomach itself. This phenomenon is even more likely to occur with exercise.

During exercise, the tightening abdominal muscles compress the stomach, moving the acid content up and onto the unprotected squamous portion of the stomach. This occurs especially during a canter or gallop, the viscera are propelled forward, essentially slamming into the stomach and compressing it against the diaphragm. The result is “splashing” of the acids (hydrochloric, volatile fatty acids and bile acids) upward onto this squamous aspect of the stomach.

The lower part of the stomach, in addition to producing the acid, receives protection by also producing mucous. The upper or non-glandular part has no protection and thus is, like our skin, more susceptible to damage by the acids.

Add grain to the horse’s diet and we compound the acid load problem because grain digestion, as it starts in the stomach, is broken down into “volatile fatty acids.” This adds to the hydrochloric acid and bile acids already present. Grains, we know empty from the stomach more quickly than forage materials and progress into the small intestine. The larger the grain portion, the quicker the emptying. Here digestion is aided by the pancreatic enzymes that break down the starch and complex carbohydrates into simple forms - forms that can be absorbed through the gut.
Large amounts of grain (over five pounds at a feeding) can not be adequately processed in the small intestine. The transit time in the small bowel, like the stomach, is relatively short.

That means that food; especially grain that is not fully digested between stomach and small intestine ends up in the cecum. The cecum is the first part of the so called hindgut and is followed by the large (ascending) colon, the small colon and the rectum and the anus. The cecum is where all the tough fibrous forage material is processed and is not well adapted to processing carbohydrates (grain). Digestion here is accomplished by trillions of “good” bacteria that break the tough fibers into useable volatile fatty acids that are then absorbed through the gut wall.

When grain gets to the hindgut the breakdown, in addition to producing volatile fatty acids, it produces gas and lactic acid. Lactic acid makes the entire hindgut more acid and creates and environment where the normal good flora die off and release endotoxins in the process. Endotoxins are poisons generated by the death of the bacteria. The good bacteria are then replaced by bacterial flora that thrives in the more acid environment created by the lactic acid that has been produced. The replacement bacteria damage the intestinal mucosa (lining) allowing the toxins to enter the bloodstream. In the resultant hind gut ulcers it is common to see picky eating, leaving food, becoming agitated or grouchy. The discomfort can also start horses to cribbing, weaving or stall walking. Other signs and consequences are bouts of mild diarrhea and/or colic that can, of course, progress to more dire consequences.

The question then becomes, beside giving medications, what can we do to help? We obviously cannot take our performance horses and duplicate their natural environment. However, we can make valuable changes via our management procedures.

The more time the stomach has food within it, the more it will properly stimulate the gut and use that amazing amount of acid production for the digestive process. With that in mind, whether at home or on the road, keep horses eating small amounts of food as frequently as possible. Hay bags with small openings, or devices that will dispense small amounts at preset intervals are available. At home the ideal, of course, is free access to pasture or forage. For those horses who “pig out” one can always use a grazing muzzle that makes them work for every blade. Also instead of feeding a bunch of hay in one pile, scatter it allover the paddock so that he moves, and picks and moves and picks over many times during a several hour period.
For horses that are on timothy, orchard grass or other grass hays, consider feeding about 20 to 25 percent of the hay in the form of alfalfa. It is postulated from studies showing lower ulcer rates when on alfalfa, that the higher calcium content and higher protein can serve to help buffer acids. Alfalfa may also induce more saliva production that helps buffer acids and protects the squamous portion of the stomach. Grazing also produces more saliva that has a protective effect. Acid buffering bicarbonate is released in the saliva by the act of chewing. Adding beet pulp (soaked and not containing molasses) can be very helpful to at risk horses. It will slow the emptying of the gut and that is a good happening. It goes without saying, whether hay or grain, make any feed changes gradually. Gut flora (bacteria) need time to adapt.

If you are feeding grain with beet pulp, the pulp/grain mix will slow the passage out of the stomach and to the small bowel. More complete conversion to volatile fatty acids will take place and allow better absorption of those volatile fatty acids from the small intestine. (Remember, you don’t want them to get to the large bowel.) You can also slow the intake of grain by feeding it in a pan that contains a number of smooth rocks that makes the horse work for every little particle. Remember that grains that contain quite a bit of fiber are good. Oats, for example, with about 50% fiber via the hulls are a safer and less carbohydrate rich but still are an energy rich source for the horse (80 - 90% percent pre-cecal starch digestibility).

You can replace some of the grain/concentrate needs by adding fats to the diet. An athletic fit horse can handle up to 10% of his energy intake with fats/oils such as corn oil, peanut oil, or the rice bran supplements that are rich in fat.

Turnout, even when not a lot of forage is available, creates significantly less risk of ulcers and colic than occurs in stalled horses. Stalls, though often a necessary evil, are still one of the worst concepts that we have forced upon our horses. Turnout – turnout – turnout as much as possible, and yes, folks – even with dressage horses! In turnout it is always best for the horse to at least be in sight of other horses. Avoid any turnout with horses that your horse doesn’t know.

When exercising horses it is good for food (especially some roughage) to be present in the stomach to help blunt the effects of acid getting pushed up and onto the unprotected squamous porting of the stomach. It cannot be emphasized enough times to do your best to feed small amounts frequently.
It is a fact that many show, competition and racehorses live on the “go” and are in the “fast lane.” So what else can we do? Think about it – some horses handle stress better than others. We tend to ride what we have, but given a choice we can select horses that are not afflicted with anxiety separation. We can try to select horses that handle many stressors better than others - such as being around new horses, horses that are less anxious in a stall, horses that trailer well. Regarding all of these factors, talent, of course, may of necessity govern our choice, so what else can we do to mitigate the ulcer risk. We can keep a partner around whether it’s another horse, a small pony, donkey or a goat. Some horses are happy with a cat, a dog, or even a chicken in their stall or trailer.

We can train horses from an early age to handle short and then progressively longer separations. They can learn to trailer quietly and to get used to the presence of strange horses, crowds and the hubbub of shows and events before actually competing. Take them to the bank, the grocery store or dry cleaner! Getting used to stress inducing conditions early is certainly easier than dealing with them once emotional patterns are set. Exposure, exposure, exposure! We can help by keeping food available via hay bags or nets even when trailering. Fill with relatively small amounts and frequently replenish the bag or net.

In my opinion, ulcers of the digestive tract are an extremely important concern considering their deleterious effects on a horse’s health, wellbeing and ability to compete at their best. We can do much to mitigate the risks. For all we do, we must still recognize that ulcers in our horses will be a part of life and must be treated.
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The author wishes to extend his deep gratitude for use of information, materials and presentations by Dr. Frank Andrews of The University of Tennessee, College of Veterinary Medicine and to Dr. Todd Holbrook of the University of Oklahoma, College of Veterinary Medicine.
By far, the greatest percentage of a typical equine acupuncture practice is concerned with musculo-skeletal problems, pain, poor performance and subclinical lameness. Stand-alone acupuncture is certainly good in these cases, but the addition of chiropractic turns a good healing method into a great healing method. This means better results and fewer patient visits as well as more satisfied clients. Thus, metaphorically, this is a combination where one plus one equals three.

Acupuncture is marvelous on muscle issues, but the inciting chiropractic dysfunction does not always resolve with just acupuncture. By the same token, the “hole” in chiropractic, as a stand-alone health care system, does not, in this author’s opinion, adequately address the muscle issues. My favored statement is that “bones can only do what muscles tell them to do!” Recognizing that both acupuncture and chiropractic work through and via the nervous system, the potential for a synergistic effect becomes more obvious.

A few words about chiropractic vertebral dysfunctions are in order to clear up some misconceptions. Two concepts are important. Number one, vertebrae do not go “out of place.” The joints that link two vertebrae may become fixed/immovable or partially fixed by muscle and ligament tightening that affects the inherent normal range of motion. The vertebral joint(s) may be fixed in a neutral position, or may be fixed in a position(s) that is somewhere still within the normal range of motion. That phenomenon creates the appearance of being out of place, but is simply the inability to return to its normal/neutral position. When such fixations occur there are chemotactic responses that result in inflammation and a pain response. The muscle fibers around the affected joint become tight and very tender to palpation. Even with good acupuncture, the fixation(s) may not resolve and will benefit from manual manipulation of the involved vertebra or vertebrae.

The second chiropractic misconception that needs to be addressed is that the spinal nerves are being “pinched.” They may be receiving pressure and produce acute pain when there is degenerative joint disease of the facets and remodeling is present. Marked pain is found in acute “chiropractic” situations such as the, “Oh @#$*, my back just went out and I can’t even
move.” This pain is primarily due to spasms and tension found in the surrounding muscles and ligaments. Additionally, the tension often results in some degree of very painful disc compression. The tension also creates partial or full vertebrae fixations that do not allow the vertebral joints to move through their full range of motion. Varying degrees of clinically evident pain occur as a result of the chemotactic inflammatory response occurring when fixations are present. This again points out the value of the acupuncture in releasing the muscle aspect and the value of the manual manipulation in restoring normal range of motion. The combination is highly synergistic.

Thus the purpose of this paper is not to teach chiropractic, but rather to help the acupuncturist identify the locations of dysfunctional vertebrae. This paper and the lecture portion will suggest and define some techniques that can mitigate the lesions. Having stated that, it is the author’s hope that the acupuncturist will be stimulated to undertake chiropractic training to take advantage of this synergistic approach.

Reactive acupuncture points often tell the acupuncture clinician where to look for vertebral dysfunction and thereby enhance his awareness of the specificity of the pathology that is present. Likewise the identification of the vertebrae involved leads the knowledgeable clinician to particular acupuncture points that should be addressed. A wonderful benefit results when the vertebral issue is addressed first, in that, some acupuncture points that horses very often significantly resent are very easy to “needle” postvertebral manipulation. It is also of benefit to accomplish the goal with minimal invasive techniques. An important fact to always remember – when you find a painful area, the source is often significantly farther away!

**Reactive Shoulder Points.** A very good example occurs when SI-9, TH-14 or Ah-shi points in the vicinity are reactive; the clinician should carefully palpate upper thoracic vertebrae T-8, 9, and 10. Look for tight and tender muscle fibers. The search for tightness or tenderness can be done with a knuckle, the blunt end of a ballpoint pen, or with the author’s preference, the tip of a needle cap. Search each vertebra from the tip of the spinous process and follow it ventrally. The wither pocket muscles (muscles where the fork or points of the saddle sit) will likely be reactive as well when palpated with the flat side of a needle cap. The vertebrae in this case are the source or root of the problem.
The reaction to pressure will carry down the shoulder and frequently show spasms in the Triceps muscles and Deltoid muscle as you are applying a stroking pressure into the “wither pocket.” Muscle tension/tightness continues down the limb and creates tension in the suspensory ligament of the affected muscle as well as tension in the Superficial Digital Flexor tendon on an affected limb. These structures will often palpate as markedly reactive to pressure. This finding will alert the acupuncturist to necessary treatment for the Suspensory Ligament issue as well as the importance of BL-13 and/or BL-42 to release the muscles forming the “wither pocket.” Often these two points are difficult to acupuncture when the Trapezius and Semispinalis muscles are painful and in tension. The diagnostic points, SI-9 and TH-14 are also painful for the horse and its resentment is often very strong.

A good treatment approach commences by “rocking” the involved vertebrae. Grasp the tip of the spinous processes into the palm of the hand and begin both a pushing and pulling motion of the vertebrae thus creating a rocking effect. Start by gently pulling toward you alternating with pushing away from you and then increasing the push pull force but keeping the force less than a hard thrust or pull. The direction of the rocking should be essentially parallel to the ground (perpendicular to the spinous process). Do this with each involved vertebra and do the rocking motion four or five times before moving to the next involved vertebra. It may be necessary to do 2 or three repetitions.

Another very helpful technique is to massage the “wither pocket” with a tennis ball (being careful not to push the muscle against bone as e.g., tips of spinous process and the back edge of scapula.) The “wither pocket” is that area where the saddle rests onto the withers. Once the rocking is done the horse is usually much more receptive to needling of the previously difficult points. Moreover, it nearly always follows that the Suspensory ligament (if only strained) will show no sensitivity or be markedly less reactive when re-palpated. Acupuncture of the above mentioned is both fundamental to good response and provides the “frosting on the cake.” Horses that are reactive in the wither pocket muscles and the chain of muscles progressing distally often exhibit girthing or cinching problems and the true originating source may well be a saddle that is pinching at the point/fork.

Reactive SP-20, Reactive GB-22, 23. These points become reactive when there is pain in the Serratus Ventralis Thoracis muscle. The correctable source in the horse lies in dysfunction of
vertebrae T-5 and or T-6. However, the true originating source for problems in the thoracic vertebrae will commonly link to poor saddle fit (pinching saddle) or to “hard hands” of the rider. Another cause can be attributed to horses that are trimmed or shod long-toe/low and under run heels. Also the muscle pain is a key finding in horses with stomach ulcers. Ulcer horses often exhibit defensive behavior when the muscles and points are stimulated. (In the “Proceedings” see this author’s paper on Equine Ulcers).

The corrective procedure will mimic the wither rocking as described above. The involved vertebrae are T-5, T-6. The Rhomboid muscle is involved as well, so use tennis ball massage applied from just dorsal to the entire dorsal margin of the scapula to the muscle-covered portion of the spinous processes of the vertebrae. Following with acupuncture of BL-12 and other Ah-shi points along the Bladder Meridian in the involved area. Acupuncture of SP-20 and GB-23 is often very helpful.

Reflex Reactivity When Simultaneously Stroking Ventrally From BL-42 Toward SP 20 And Stroking Dorsally From SP 20 Toward BL-42. The technique is nicely accomplished by using the knuckle of the index finger of both the left and right hands to apply the stroking pressure. One hand is stroking ventrally while the other hand is simultaneously stroking dorsally. Stroke once or twice lightly before applying enough pressure to be diagnostic. Don’t surprise the horse with a sudden diagnostic level of pressure stroke. It will often provoke an exaggerated and/or a false “positive” response as well as, perhaps, eliciting a nasty unwanted behavioral response. With repeated strokes the effect will be magnified into a higher degree of reactivity/supersensitivity. When rechecking after acupuncture and manipulation (described below), the horse may first respond with a muscle memory response that diminishes with each additional diagnostic stroke.

If reactivity in the Serratus Ventralis Thoracis muscle occurs only when stroking downward, the source is T-5 and/or T-6. If the reactivity is noted on the upward stroking, while using the simultaneous stroking, the problem lies in the rib attachments at the sternum. Both pathologies may be present, so it is important to distinguish whether one or both exist.

In the first scenario where the upper thoracic vertebrae problem exists, the best option is to test for reactivity of T-5 and T-6 as previously described (utilizing the needle cap) and then “rock” and manipulate these vertebrae as previously discussed. Acupuncture of BL-12, SP-20, and GB-22 and 23 is indicated.
If the problem is at the rib attachments (usually ribs 1 – 5), acupuncture at KI-27 (bilaterally) will help with the 1st rib syndrome. CV-22, PC-1, CV-17 and CV-14 can be helpful. From a manipulation standpoint, the clinician can do a thoracic “lift” that elevates the thorax and simultaneously causes the thorax to bend toward the person doing the lift. The technique is to reach under the thorax with one or both hands and grasp the ascending pectoral muscle (on the side opposite the operator) in the area of PC 1 and lift upward and in the direction of the operator’s chin. Caution is in order, as some horses will resent the attempt. Several repetitions may be required. The Latissimus dorsi muscle may also be involved at its insertion. If so, acupuncture of SP-20 and 21 as well as GB-22, 23 will be helpful. Forward stretches of the front limb are very helpful in resolving the problem and are a very good follow-up technique for the clinician to leave with the owner. If the correction is not achieved it would be well to refer to a trained equine chiropractor or osteopath.

Involvement of the Latissimus dorsi Muscle at its Origin. Invariably, when there is hypertonicity in the Latissimus muscle, there is some upward fixation of the shoulder, and a pulling back of the humerus. Extension of gait is compromised. Also, invariably, there is vertebral dysfunction in L-1, L-2, as well as (commonly) in L-3 and T-18. This, of course, creates pain and tension in the paraspinal muscles and the Longissimus muscle. Trigger points appear in the Thoraco-Lumbar Fascia. From an acupuncture standpoint, release of this major muscle can be accomplished by acupuncture or even better yet by electro-acupuncture of the Jaiji line from T-16 or 17 to L-6. BL-20, 21 and 22 are often indicated. Adding GB-22 and 23 to the formula can facilitate muscle release at the insertion of the Latissimus.

Reactive Acu-points at TH-16, SI 16, BL 10, and LI-16. LI-17, ST-7, and GB-20 are also often found to be reactive in the following syndrome.

This combination of points is highly indicative of Hyoid Muscle Hypertonicity. The significance of this syndrome lies in its detrimental effects on performance. The Omohyoid muscle originates from the subscapular fascia (bilaterally) and inserts on the lingual process of the Basihyoid bone. The Sternohyoid muscle originates on the manubrium and first rib. Their normal function is to aid in deglutition.

However, when in a state of chronic contraction (hypertonicity), the hyoid muscles function to draw the tongue rearward and there-by limiting lateral flexion and freedom of jaw
movement. In the case of the Omohyoid muscles having contracted bilaterally they draw the scapula forward and restricting freedom of movement of the shoulder. To better understand the relevance of this, one should try this exercise: forcibly draw your tongue back and then try to turn the head. Note the tightness of all neck muscles. When tension occurs it also includes the Stylohyoid muscle. This muscle travels from the Basihyoid bone to the Mastoid Process. If the tension is greater on one side than the other, this often results in Temporo-mandibular joint pain. It may even create a misalignment of the incisors. The pain is usually in the TMJ joint on the side opposite the most hypertonic Omohyoid muscle. ST-7 is a very good diagnostic point for TMJ pain as well as a good treatment point. In the author’s experience with many hundreds of horses, 75% of the cases of Temporo-Mandibular joint pain seen stem from the hyoid muscle hypertonicity rather than dental issues. This statement is not to deny the extremely important aspect of good dental care and the role of dentistry in cases of TMJ pain.

Because of the tension created at the poll area and the tension created at the base of the neck, one will essentially always find reactivity at the C-1, C-2, C-3, C-5, and C-6; thus the significance of GB-20, TH-16, SI-16, and LI-16 and 17. The layered Cranialis muscles are often very tense and hence, the significance of BL-10 diagnostically and therapeutically.

As valuable as the acupuncture is, in the author’s opinion, the most effective release is to work the hyoid muscles from both the origin and the insertion. Taking the tongue from the mouth and simply holding (but not pulling) and preventing the horse from getting the tongue back into its mouth. This is very effective, but has some caveats. Maintain a strong but gentle hold on the cheek piece of the halter. The hold is soft enough to go with the motion of the horse, but strong enough that one’s reaction, should the horse try to rear, is to let go of the tongue before letting go of the halter. It pays to have a good handler holding the horse! Do not do this procedure with the horse cross-tied.

The release at the origin is more easily done if the handler can help bring the head around into lateral flexion and concomitantly asking the horse to bring its head down. Using the right side of the horse as an example, the clinician will place his/her left hand on the Cranialis muscles on the left side and with the right hand, work over the Subclavian (Deep Pectoral) muscle and under the scapula. The more the horse comes into lateral flexion and drops its head, the deeper one can insert the hand under the scapula. Do not try to force your way under, but rather go with
when the horse allows the procedure. The release may take place in stages, so be patient. The release should be done bilaterally. At the completion of one or both of these releases, it is common to observe major release and signs of relief.

It is not infrequent for fixations of C-7 and T-1 to self-correct during this procedure. The shift can be felt under the operator’s hand. When these procedures are complete, the upper Cervical vertebrae self resolve and likely not require adjustment. The Cranialis muscles as well as the Brachiocephalicus muscles will also be released. It may also be necessary to use deep massage in the area around the origin of the Sternohyoid muscle to get release of all muscles at the ventral base of the neck

Now is the time to utilize acupuncture to secure a more lasting and complete treatment. BL-10 and GB-20 are often difficult needle insertions, but after the releases work nearly all horses accept needling these locations with little resistance. The muscles around the origin (manubrium and first rib) of the Sternohyoid muscles can be facilitated by the use of (bilateral) KI-27 and CV-22.

*Note: a much more comprehensive paper on the importance, pathogenesis and treatment of this important topic of hyoid muscle pathology is available by contacting this author.

There are many more examples of the intimate and symbiotic relationship of acupuncture/chiropractic and osteopathy but the list is too extensive for inclusion in this paper. As wonderful and effective this symbiotic treatment approach is, it’s guaranteed to improve the quality of your work and enhance your client’s appreciation. The horses will most certainly thank you. It is the authors hope that these few chosen examples stimulate equine acupuncturists to avail themselves of good chiropractic or osteopathic training.
Electroacupuncture and Hirudotherapy in the Treatment of Horses
Martina Steinmetz, DVM
Friedrich Ebert Str. 45
68535 Edingen Neckarhausen

Electroacupuncture (EA) in the narrow sense can be defined as the passing of an electrical current through acupuncture points either through inserted needles or contact electrodes. The use of medical leeches in (veterinary) medicine is called Hirudotherapy (HT). Both of these therapies, Electroacupuncture and Hirudotherapy, can be used as independent methods of treating and in synergistic complex with each other. In literature research no information can be found about the combination of EA and HT. But additional synergistic effects can be expected, when EA and HT are performed at the same time:

- Reduce of withdrawal of the horse (when the leeches are placed on the skin, crawling around and biting) via the analgesic and anaesthetic effect of EA
- Improvement of blood circulation,
- Less time consumption for the veterinarian

Electroacupuncture (EA) is a very important modality of acupuncture for the treatment of horses. In a narrow sense, EA is considered as electrical stimulation of acupoints through needles. EA can be more effective than manual stimulated acupuncture in some situations, and often potentiates the effects of traditional methods when treating pain or inducing anaesthesia for instance.

Indications for EA are deficient conditions, neurological deficits, severe chronic pain, arthrosis, dystocia, and analgesia. EA analgesia provides little muscle relaxation and does not impair memory/ consciousness. Acupuncture anaesthesia works better near the midline and above the diaphragm. EA has effects on pain threshold, cardiovascular system, circulation (may increase peripheral vasodilatation), peripheral and global temperature, autonomic function, immune system, tissue repair and modulation of organ function.

Contraindications are hemorrhagic areas, areas with open wounds, skin surface suffering from phlebismus or atrophic disease, malignant tumors, fever, and others.

Points used in EA for post-traumatic pain and anaesthesia vary widely. They are most commonly on meridians passing through the affected area, both local and distal, together with
points selected on basis of TCM function. General points, paraspinal points and trigger points can also be helpful (1).

_Hirudotherapy (HT)_ is known since ancient times. Along with the general blood letting and hemo-acupuncture, it has been considered as a necessary remedy in treatment for different diseases. HT may be applied at any disease, but especially thrombosis, equine laminitis, hematoma, arthrosis, inflammatory and traumatic processes. Leeches are being used to suck blood and remove congested blood to allow normal circulation to return to the tissues. During the process of feeding/sucking, medical leeches secrete a complex mixture of (>100) biologically and pharmacologically active substances into the wound (Hirudin, Calin, Hyaluronidase, Tryptase inhibitors, for instance(2)). The use of medical leeches can be very helpful in the treatment of excess patterns and blood stagnation in horses (3), as also in the treatment of chronic, painful diseases.

Unfortunately, horses often refuse this kind of “hemo-acupuncture” by kicking or biting the leeches off. And the area, the leeches are to be attached, must not be treated by cold or local anaesthetics to prepare the horse. This will discourage the leeches from attaching.

Thus I tried to combine EA and HT.

The _primary objective_ of this practical “study” was to find out how leeches react on the simultaneously performed EA, if they are disturbed or not by current flowing through the tissue they are sucking on. The _secondary objective_ was to see if the withdrawal of horses on the placement of leeches could be reduced by the analgesic and anaesthetic effects of EA. The _therapeutic outcome_ was expected to be at least as well as if the treatment with EA and HT would have been performed separately.

**METHOD:**

10 horses with history of trauma (different external, localised diseases like tendonitis, hematoma, and muscle rupture) and diagnosis of Blood or Qi stagnation where treated at least two times with EA and HT. (See figure 1: HT and EA treatment of a horse with inflammation of superficial transverse metatarsal ligament).

In the first treatment the leeches were placed at first, than the needles were set, connected to the EA device and taken under current. In the second treatment the EA was started and after
10 minutes the leeches were placed. Care was taken not to treat directly after traumatic injury (see contraindications). In some cases the first treatment was performed some days after trauma.

For local EA two needles were placed on acupoints of one meridian crossing the affected area (where the leeches are placed), one needle proximal/cranial and one distal/caudal to the area, and connected with the anode and the cathode of the EA device cable. For segmental EA needles were placed on respective points of the Bladder meridian on the same side as local treatment. In some cases additional points with general analgesic effect were used (e.g. LI 4, PC 6, SP 6). The needles and electrodes were fixated with tape, because the movement of horses may dislodge the needles and electrodes. The EA device was an IC 1107 (bi-phasic impulse form, 500 Ohm, 1-500 Hz (4)), using alternating frequencies (2 Hz and 100 Hz) with alternating gentle and strong intensity of stimulation for 20 minutes.

RESULTS:

Concerning the first objective, the leeches did not show any difference of their feeding behaviour, whether EA was performed before or after they started blood sucking. They started sucking immediately and they did not interrupt sucking, independently of the start of EA. There was a clinical impression by the author that the leeches performed a better job under EA (perhaps due to better blood-circulation in the affected area), sucking faster and more effectively. However, the time the leeches took to suck nor the volume of blood sucked was not measured or calculated.
Concerning the second objective, the horses showed less withdrawal when the EA was started first and the leeches were placed later. When the leeches were placed before EA, all horses tried at least one time to refuse the leeches by kicking, biting or stomping with the hoof on the floor. When leeches were placed after EA started, especially in areas near/on the body, the horses showed less to no refusal movement.

DISCUSSION:

The combination of Hirudotherapy and Electroacupuncture at the same time can be used for treatment of different diseases of horses. EA should be started first, than the medical leeches can be placed. Thus the horses accept the treatment in a calm manner and for the Veterinarian this procedure is less time consuming. Further investigation should be done to consider the therapeutic benefits and to prove the analgesic and anaesthetic effect of EA for HT.
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