

## Pearls from TCVM Practice

# Ways to Improve Acupuncture Outcomes in Equine Practice

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### ABSTRACT

Acupuncture is the most extensively researched modality under the umbrella of both traditional Chinese medicine (TCM) and traditional Chinese veterinary medicine (TCVM). It has been demonstrated that it induces local, segmental, central and autonomic effects, many of which have the potential to strongly decrease nociceptive signals and pain perception. Acupuncture has been used for many equine clinical conditions including lameness and is now a familiar treatment modality to both horse owners and equine veterinary practitioners. This paper will review the main factors that impact clinical results, describe treatment plans for common lameness presentations, and outline several case examples.

**Key words:** traditional Chinese veterinary medicine, equine, lameness, acupuncture

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### ABBREVIATIONS

|             |                                         |
|-------------|-----------------------------------------|
| <b>AA</b>   | Aqua-acupuncture                        |
| <b>BID</b>  | Twice daily                             |
| <b>DNAP</b> | Dry needle acupuncture                  |
| <b>EA</b>   | Electro-acupuncture                     |
| <b>HA</b>   | Hemo-acupuncture                        |
| <b>LAP</b>  | Laser-acupuncture                       |
| <b>Moxa</b> | Moxabustion                             |
| <b>PA</b>   | Pneumo-acupuncture                      |
| <b>PO</b>   | Oral dosing                             |
| <b>TCVM</b> | Traditional Chinese veterinary medicine |

Acupuncture is defined as the stimulation of specific point(s) on the surface of the body by insertion of a filiform needle which induces local, segmental, central and autonomic effects which result in homeostatic and/or therapeutic effects.<sup>1-5</sup> It has been used for a variety of equine clinical conditions and is a familiar treatment modality to both horse owners and equine veterinary practitioners.<sup>2-4</sup> From a traditional Chinese veterinary medicine (TCVM) standpoint, the aim is to allow *Qi* (vital energy or life force) to flow harmoniously, which for a Western practitioner can be seen as a stimulation of the nervous system.

Research studies have documented that acupoints

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are located in areas of focused neuroimmune modulation.<sup>6,7</sup> Analgesia induced by acupuncture is associated with the release of the neurotransmitters including beta-endorphin and serotonin and its anti-inflammatory effect is produced by regulating proinflammatory factors including interleukin-6 (IL-6) and cyclooxygenase-2 (COX-2).<sup>8-11</sup> These effects are closely associated with what is referred to as the *De Qi* response, or the “arrival of *Qi*”. *De Qi* responses are often clinically observable myofascial or muscle fasciculations as the needle reaches the acupoint upon its insertion. Also associated are ear movement, lip movement, urination or bowel movement, and/or when the patient, sensing a neurogenic response, looks at the needle or veterinary acupuncturist. The *Ling Shu* book of the *Huang-di-nei-jing* (Yellow Emperor’s Classic of Internal Medicine) emphasizes, “The most important thing about acupuncture treatment is that the effect comes only with *De Qi*.”<sup>12</sup> This basically means “No *De Qi* response, no clinical results from acupuncture treatment”. These *De Qi* responses can be measured as the dose of acupuncture that includes size of the needle, the depth of needle insertion, number of acupoints used, and the length and frequency of acupuncture stimulation.

### GENERAL RULES FOR ACUPUNCTURE THERAPY

#### Size of Acupuncture Needles and the Depth of Needle Insertion

Acupuncture treatment involves the insertion of thin sterile needles with a certain size (gauge) and length depending on species and location of acupoints (Tables 1 and 2). To simplify clinical practice, the authors

recommend using 28 gauge needles for all large animals, including horses, cattle, llamas and camels, while 30 gauge needles are suitable for miniature horses, goats, sheep, alpacas and pigs. The depth of stimulation at many acupuncture points alters the effects on the body. For example, acupuncture stimulation at ST-36 induced a decrease in sympathetic renal nerve activity (RNA) and mean arterial blood (MAP) pressure in rats under deep anesthesia.<sup>13</sup> Acupuncture stimulation, however, at just the level of the skin superficial to ST-36 did not induce any change of MAP and RNA. This suggests that the anatomic structures and physiologic effects of acupuncture points lies in the deeper tissues beneath the epidermis. Hence, the depth of the needle insertion impacts the *De Qi* and therefore the outcome of acupuncture treatment, as mentioned above. The most commonly used lengths of acupuncture needle depend on the location of each acupoint and species (Table 2). For equine practice, the most commonly used needles are 1, 2 and 3-inch. One-inch needles are often used for acupoints located on the feet, lower limbs, face and tail; 2-inch used in the area of the neck, back, shoulder, stifle; and 3-inch used for the hip acupoints.

- **Tip one: Do not use needles that are too small; they won't induce good results, as they cannot generate enough *De Qi* response.** It is the authors' recommendation to use 28 gauge acupuncture needles of varying lengths, depending on the location of acupoints in horses.

#### Number of Acupuncture Points, Duration of Each Acupuncture Session and Frequency of Acupuncture Treatment

In general, 10 to 20 acupoints are selected for each session of acupuncture treatment with each session lasting about 10 to 30 minutes once the needles are placed.<sup>2,3,14</sup> Many clients want immediate results, but usually a minimum of three sessions of acupuncture are needed to treat most clinical conditions.<sup>2,3,14,15</sup> Hence, acupuncture often takes time to see significant improvement, especially since it is commonly used for chronic diseases.

- **Tip Two:** Acupuncture takes time and usually three sessions are needed for the resolution of lameness in horses.

**Table 1:** Acupuncture needle gauge, length and application<sup>12</sup>

| Gauge | Millimeters | Application                                                                 |
|-------|-------------|-----------------------------------------------------------------------------|
| 34    | 0.22        | All small animals: cats, rabbits, small dogs, avian and small exotics       |
| 32    | 0.25        | Miniature horses, ponies, goats, sheep, alpacas, dogs                       |
| 30    | 0.30        | Miniature horses, ponies, goats, sheep, alpacas, dogs, cattle, llamas, pigs |
| 28    | 0.35        | All large animals: horses, cattle, llamas, pigs, elephants, camels          |
| 26    | 0.40        | All large animals: horses, cattle, elephants, camels                        |

**Table 2:** Acupuncture needle length and application<sup>12</sup>

| Millimeters | Inches | Application                                                                                                                                                                    |
|-------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13          | 0.5    | Goats, sheep, alpacas, pigs: Head, feet, lower limbs, ears, tail, Front- <i>Mu</i> (alarm) points<br>Horses, cattle and llamas: ears/eyes, feet                                |
| 25          | 1.0    | Goats, sheep, alpacas, pigs: Neck, shoulder, limbs, Back- <i>Shu</i> (association) points<br>Horses, cattle and llamas: Feet, lower limbs, head, tail, Front- <i>Mu</i> points |
| 40          | 1.5    | Goats, sheep, alpacas, pigs: Hip, shoulder<br>Horses, cattle and llamas: Back- <i>Shu</i> points, limbs                                                                        |
| 50          | 2.0    | Goats, sheep, alpacas, pigs: Hip<br>Horses, cattle and llamas: Neck, shoulder, stifle, lumbosacral, hip                                                                        |
| 75          | 3.0    | Horses and cattle: hip                                                                                                                                                         |
| 100         | 4.0    | Horses and cattle: hip                                                                                                                                                         |
| 150         | 6.0    | Horse: hip                                                                                                                                                                     |

## COMMON METHODS OF VETERINARY ACUPUNCTURE AND INDICATIONS

### TCVM Pattern

Two patients having the same disease process as diagnosed by Western medicine may be diagnosed as having two distinctly separate “Pattern” diagnoses in TCVM. This is because a TCVM disease Pattern is holistic, based on a patient’s specific personality type or “Constitution”, their behavior, environmental and dietary impacts, as well as clinical presentation and pathologies. Patients, therefore, receive different TCVM treatment according to their specific disease Pattern, whereas in Western medicine they would be treated identically based solely on their clinical signs.<sup>16</sup> The four main Patterns include 2 pairs: Excess vs Deficiency and Heat vs Cold. Excess and Deficiency Patterns refer to the opposing forces between the body’s resistance and pathogenic factors during the course of a disease. As an example, an Excess Pattern could present as erythema with a serous exudate, whereas a Deficiency Pattern may present as dry flaky skin. Cold and Heat Patterns are used to determine the nature of a disease through the clinical signs of an imbalance of the body’s warming and cooling functions.<sup>17</sup> For example, intuitively a Heat Pattern would present as localized or systemic pyrexia, often with cool-seeking behavior; and a Cold Pattern as inadequate blood flow in the extremities, such as palpably cold ears and legs, with heat-seeking behavior. Some acupuncture methods are particularly good at treating Excess or Heat, while others address Deficiency or Cold.

### Dry Needle Acupuncture

Dry needle acupuncture (DNAP) is the most commonly used technique and involves the insertion of fine, sterile needles into specific anatomic areas of the body (“acupoints”).<sup>12</sup> Mechanical stimulation can be applied to the needles manually if electro-acupuncture is not indicated and if the patient tolerates it.

**Indications:** DNAP is one of the oldest acupuncture methods and can be used in treating any Pattern.

**Cautions and Contraindications:** Caution is warranted in placing needles in the acupoints around the abdomen, as they are not easily accessed in horses and are often associated with reflexive or reactionary kicking. In addition, in pregnant mares, points around the abdomen as well as BL-67, SP-6, ST-36, ST-40, LIV-3 and LI-4, should be used with judgement and skill.

### Electro-acupuncture

Electro-acupuncture (EA) involves the use of a mild electrical current by attaching electrodes and applying a mild electric current to the needles.<sup>18</sup> EA enables penetration of electric energy into the percutaneous and muscle tissue which promotes a more profound local and systemic analgesic response.<sup>19</sup>

**Indications:** EA is often used for Heat Patterns such as high fever; for Excess Patterns including pain

management, lameness, colic, and impaction; and for Deficiency Patterns including diarrhea, infertility, and facial or radial nerve paralysis.

**Cautions and Contraindications:** Caution is needed when using EA in cases with seizures, neoplasia, a pacemaker or pregnancy. It is also a time-consuming protocol, thus may not be the first choice for a busy equine practitioner.

### Aqua-acupuncture

Aqua-acupuncture (AA), sometimes called pharmacopuncture, involves the injection of sterile liquids into acupuncture points in order to stimulate the point.<sup>20</sup> AA may provide a more prolonged stimulus at an acupoint than DNAP. Mildly caustic or autologous substances (i.e. blood) can also be used. Commonly used substances include saline, polysulfated glycosaminoglycans, vitamin B complex and vitamin B12.

**Indications:** AA is often used for myofascial or muscle pain, muscle atrophy, anorexia and diarrhea.

**Cautions and Other Comments:** Since AA is simple and relatively quick, it is one of the most popular acupuncture methods used in equine practice.

- **Tip Three:** If aqua-acupuncture (which is the most convenient), does not produce the desired result, electro-acupuncture is an efficacious back-up method in equine practice.

### Hemo-acupuncture

Hemo-acupuncture (HA), also called “Red Needle”, is defined as intentional puncture of a blood vessel at an acupoint by a veterinarian to release several drops/draw blood using a #20 to 25 gauge hypodermic needle. The purpose of this modality is to release Heat, Heat Toxin or Blood Stagnation from the body.

**Indications:** HA is the most effective acupuncture method to treat Blood Stagnation, Blood Heat, Excess Heat or Damp Heat that are often presented in anhidrosis, laminitis and urticaria.

**Cautions and Contraindications:** HA is contraindicated for weak/debilitated animals, *Qi* and/or Blood Deficiency, dehydrated or severely *Yin*-deficient patients, pregnant animals, or patients with potentially zoonotic blood-borne pathogens. HA cannot repeat the same point for a week.

### Pneumo-acupuncture

Pneumo-acupuncture (PA) is an acupuncture technique with which fresh sterilized air is injected into an acupoint. An air bubble is created within the subcutaneous tissues causing stimulation of the acupoint.

**Indications:** PA is most commonly used for muscle atrophy, *Wei* Syndrome and *Qi* Deficiency.

**Cautions and Contraindications:** Air must be subcutaneously injected. It cannot be used at any hemo-acupuncture points or be used for any Excess Patterns.

## Moxibustion

This treatment modality involves the heating of either an acupuncture point or a needle inserted into an acupuncture point with moxa, a type of bundled herb consisting of *Artemisia* (mugwort).<sup>21</sup> Modern research indicates that the mechanism of action of moxibustion mainly relates to the thermal and pharmacological effects of moxa and its combustion products at the acupoint.<sup>21</sup>

**Indications:** Moxibustion (Moxa) is good for Cold and Deficiency Patterns such as chronic arthritis, back pain and poor digestive and absorptive conditions.

**Cautions and Contraindications:** Moxa should not be used for Heat Patterns.

## LASER (light amplification by stimulated emission of radiation) Acupuncture

Laser acupuncture (LAP) is defined as the stimulation of traditional acupuncture points with low-intensity, non-thermal laser irradiation (medical lasers usually ranging from Class 1 to 3).<sup>22</sup>

**Indications:** LAP is effective for wounds including open, infected or non-healing lesions.<sup>23</sup> One study demonstrated that dry needle, LAP and aqua-acupuncture were equally effective for treating back pain in horses.<sup>24</sup> Its efficacy is dependent on tissue penetration and is improved by use in acupoints located near the skin surface such as the feet where many horses resent having needles placed.

**Cautions and Other Comments:** The results for acupoints in areas where the skin is thick or dark colored (melanin pigment causes superficial absorption) may not be as desired, in that the infrared light may not be able to penetrate deeply enough.<sup>25</sup> The penetration may be improved, however, if the skin is pre-cooled with ice or clipped.<sup>26</sup>

## A LIST OF TOP ACUPOINTS FOR COMMONLY SEEN LAMENESS

There are over 300 transpositional and over 150 classical acupuncture points in horses.<sup>12</sup> In TCVM, a single Western medical diagnosis may present as different Patterns due to variation in patient Constitution, environment and diet. Each patient should, therefore, be treated according to his or her specific Pattern. It takes substantial training and experience, however, to differentiate between Patterns and use the TCVM

examination (including tongue and pulse diagnosis) optimally. The information below outlines suggested acupoints for various disease entities with the intent to introduce a simple protocol for the most common Patterns. As a TCVM practitioner gains experience, however, a more refined, accurate, Pattern-based acupuncture and Chinese herbal medicine treatment should be used to achieve maximal effect.

### Acupuncture for foot/hoof/heel pain<sup>12,27</sup>

DNAP or EA (Top 5 local points): PC-9, *Qian-ti-men*, LI-3, SI-3 and TH-1 (Figure 1, Table 3)

Add DNAP: LU-11 when BL-13 is sensitive

Add DNAP: LI-4 if LI-18 is sensitive

Add HA for acute laminitis: LI-1, SI-1 and TH-1

### Acupuncture for shoulder pain<sup>12,27</sup>

DNAP: SI-1, SI-3, TH-1 and LI-3 (Figure 2, Table 3)

AA: GB-21, TH-15, LI-16, *Shen-shu*, BL-11

EA: LI-15+TH-14, PC-1+GB-21, SI-9 + SI-10

AA or PA: *Gong-zi* or any regions of muscle atrophy

### Acupuncture for cervical stiffness and/or pain<sup>12,27</sup>

DNAP: SI-3, TH-1 and LI-3 (Figure 2, Table 3)

AA or EA: *Jing-jia-ji*, GB-20, GB-21, BL-10, BL-11, *Jiu-wei* (Figure 2)

### Acupuncture for back pain<sup>12,27</sup>

DNAP: BL-67, BL-65, BL-60, *Wei-jian* (Figure 2, Table 3)

AA or EA: *Hua-tuo-jia-ji*, BL-20, BL-23, *Shen-shu*, BL-40

### Acupuncture for sacral and hip pain<sup>12,27</sup>

DNAP: BL-67, GB-44 (Figure 2, Table 3)

AA or EA: BL-23, *Shen-shu*, *Shen-peng*, *Shen-jiao*, *Ba-jiao*, BL-53, BL-54, BL-40

### Acupuncture for stifle pain<sup>12,27</sup>

DNAP: ST-45, GB-44, BL-18, BL-20 (Figure 2, Table 3)

AA or EA: BL-40, ST-34, ST-35, ST-36, GB-32, GB-34

### Acupuncture for hock pain<sup>12,27</sup>

DNAP: BL-67, GB-44, BL-62 (Figure 2, Table 3)

AA or EA: BL-54, *Shen-shu*, BL-40, BL-60, KID-3, KID-7, GB-39

**Table 3:** Channel/Meridian Abbreviations

| Abbreviation | Channel/Meridian | Abbreviation | Channel/Meridian |
|--------------|------------------|--------------|------------------|
| LU           | Lung             | BL           | Bladder          |
| LI           | Large Intestine  | KID          | Kidney           |
| ST           | Stomach          | PC           | Pericardium      |
| SP           | Spleen           | TH           | Triple Heater    |
| HT           | Heart            | GB           | Gall Bladder     |
| SI           | Small Intestine  | LIV          | Liver            |

## CASE STUDIES

### Case Example 1

A 10-year-old Thoroughbred gelding presented with acute onset of bilateral forelimb laminitis one week after prosthetic laryngoplasty. He had a history of white line disease in both front feet. Radiographic evidence showed that the distal phalanges of both thoracic limbs had rotated by roughly 10 degrees. The horse was pyrexia and was being treated with 2 grams phenylbutazone<sup>a</sup>, oral administration (PO), twice daily (BID). On examination, the gelding's Constitution was Wood. He was 4/5 lame on the left thoracic limb, and 5/5 lame on the right thoracic limb. His tongue was dark purple and his pulse wiry. The acupuncture points LI-17, LI-18, PC-1, and BL-13 (5/5) were sensitive bilaterally. TCVM diagnosis, based on history, clinical signs of dark purple tongue, wiry pulse, and sensitivity at diagnostic points: *Qi*-Blood Stagnation of both front feet and Liver Damp Heat was made. Treatment for this case included the following:

#### Acupuncture:

- DNAP: *Bai-hui*
- HA: TH-1, LI-1, SI-1 with 25-gauge hypodermic needles
- EA: 20 Hz 20 minutes: all 7 pairs of points, one session per week for 3 weeks  
*Shen-shu*, bilateral  
 GB-21 + BL-11, bilateral  
*Qian-ti-men* + LI-3, bilateral  
 PC-9 + SI-3, bilateral

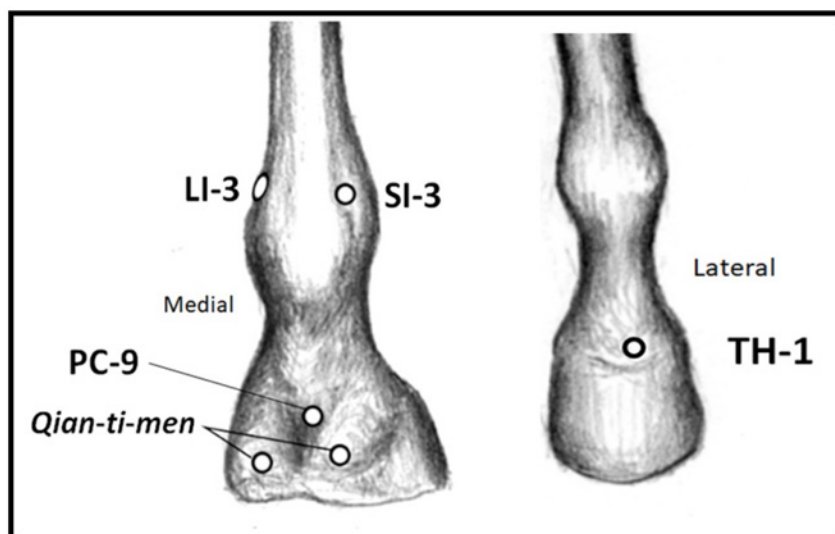
**Outcome:** The gelding became less lame (lameness 2/5 in both front limbs) and was comfortable enough to move around in the pasture after 3 weekly acupuncture treatments. The horse was totally sound and galloped in the pasture after another 3 biweekly acupuncture treatments, using DNAP and EA at the same points

described above. Since then the horse has become a pleasure riding horse and has had no foot lameness for the past 11 years at this writing.

- Tip Four:** Aggressive acupuncture treatment with multiple sessions per week can be used effectively for the treatment of acute laminitis in horses.

### Case Example 2

A 20-year-old Quarter Horse gelding presented with chronic back pain of one-year duration. While being ridden, he would swing his right pelvic limb laterally and kick out. He had a history of right hock osteoarthritis. Corticosteroid injections into the hocks did not appear to improve the condition. The referring veterinarian had also diagnosed equine protozoal myeloencephalitis (EPM) based upon analysis of the cerebrospinal fluid. After three months of EPM medication, the horse seemed more alert, but he would still side-kick during rides. Extensive massage (each session lasting several hours) of his back and hip provided mild relief. Saddle changes gave no relief. The horse was a typical Earth constitution and tolerated any type of treatment well (e.g. dental work, injections, shoeing, acupuncture needling). He had remained generally healthy his entire life, except for this side-kicking issue. As a pleasure riding horse (trotting on trails and light jumping) he was ridden about three times a week for about an hour each time. On TCVM examination, the gelding appeared alert with good *Shen* (mentation). His tongue was purple and his pulse was deep and fast. On acupuncture point palpation ("scanning"), he was very sensitive (4/5) over points BL-13 through BL-21 on both sides. The points BL-38, BL-39, BL-53 and BL-54 were mildly sensitive (2/5) on palpation. The TCVM diagnosis for this gelding was *Qi* Stagnation of the back and secondary *Qi* Stagnation in the pelvic limbs. Treatment included the following:



**Figure 1:** Top five acupuncture points for foot and heel pain in horses<sup>28</sup>

**Acupuncture:** 1 session every 3 to 5 weeks for a total of 3 treatments

- DNAP: *Bai-hui*, BL-67, GB-44, BL-60
- EA (20 Hz for 20 minutes) 6 point pairs: *Shen-shu* + *Shen-shu*; BL-15 + BL-15; BL-18 + BL-18; BL-21 + BL-21; BL-40 + BL-40; BL-54 + BL-54
- AA (5 ml of 1000mcg/ml vitamin B12 per point): *Hua-tuo-jia-ji* along BL-17 to BL-21

**Chinese herbal medicine:** Modified *Shen Tong Zhu Yu Tang*<sup>b</sup> at 15 grams, PO BID for 45 days

**Outcome:** After two acupuncture treatments and seven weeks of daily herbal medication, the horse's back pain and side-kicking behavior were 80% improved. After one further acupuncture treatment, these problems were clinically resolved. The previous rider and horse owner (body weight approximately 250 lb) had been encouraged by the horse's improvement and sent him to her niece (body weight 100 lb) to be used for pleasure riding. Subsequently the horse enjoyed 8 more years of use and had no recurrence of back pain before being retired to pasture as a sound horse.

- Tip Five:** Back pain may be caused by a rider or saddle. These factors must be considered as part of your diagnosis and treatment of a sore back in horses.

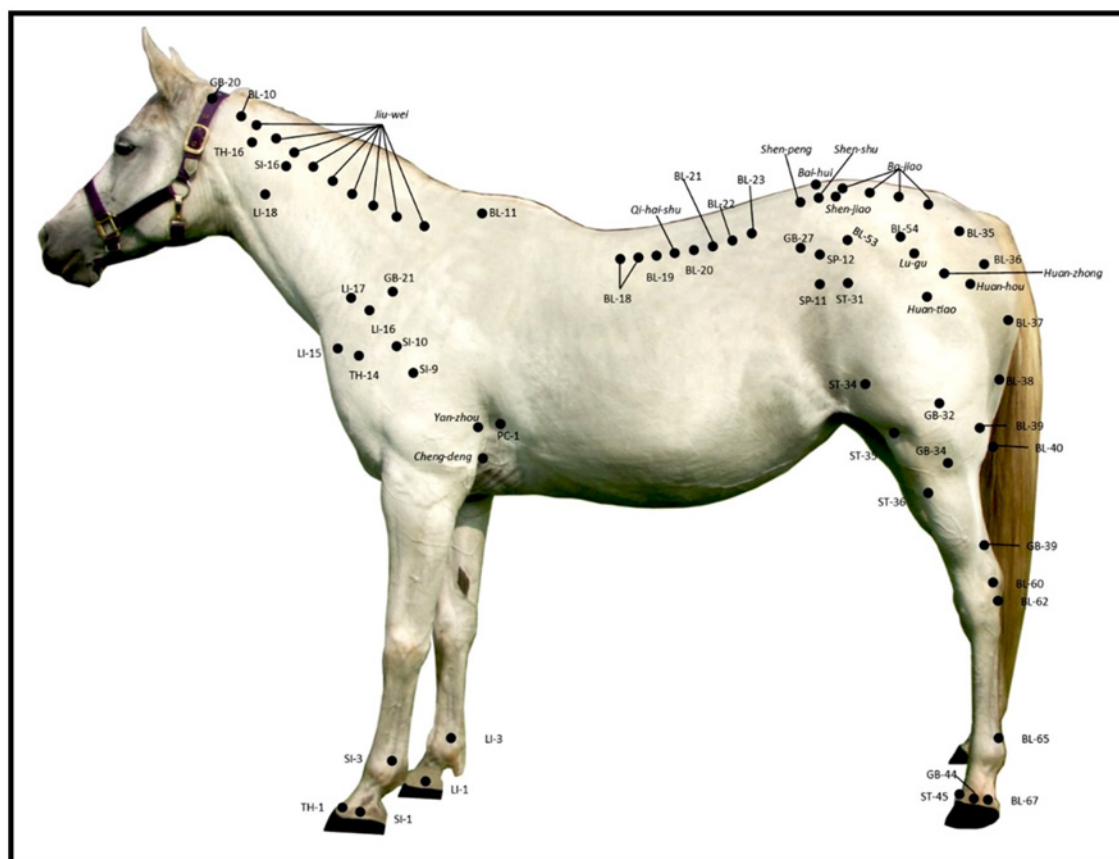
### Case Example 3

A 16-year-old Thoroughbred broodmare presented with severe pelvic limb lameness. During her racing career, 10 years earlier, she had a history of a hip fracture and tendinitis. After her retirement from racing, she produced three foals from normal pregnancies. On TCVM examination, the mare's lameness grade was 4/5 in her right pelvic limb. On her right side, BL-54, BL-53, *Lu-gu*, *Huan-tiao* and *Huan-hou* were very sensitive (4/5) on palpation. Her Constitution was Earth. Her tongue was purple, swollen and wet and her pulse was deep and weak. The mare had desirable genetic traits; therefore, the goal was to make her sufficiently comfortable and prepared for the next breeding season. The TCVM diagnosis was *Qi*-Blood Stagnation of the hip with Kidney *Qi* Deficiency. Treatment included the following:

**Acupuncture:** 1 session per month for a total of 3 treatments

- DNAP: ST-45, BL-67, GB-44, *Bai-hui*
- EA (20 Hz for 20 minutes) at 6 point pairs: *Shen-shu* + *Shen-shu*; BL-54 + BL-54; BL-40 + BL-35 bilaterally; left BL-38 + SP-12; right *Lu-gu* + GB-29

**Chinese herbal medicine:** Modified *Shen Tong Zhu Yu Tang*<sup>b</sup> at 15 grams, PO, BID for 3 months



**Figure 2:** Acupoints for the treatment of commonly seen lameness conditions in horses<sup>28</sup>

**Outcome:** The mare became pasture sound after three acupuncture treatments and three months of daily herbal medication. At that point, treatment of infertility due to Kidney *Qi* Deficiency was initiated. The mare was prescribed *Sheng Jing San*<sup>c</sup> at a dose of 30 grams PO, BID for two months. The mare went on to produce six additional foals before she was retired to pasture at the age of 23 years.

- **Tip Six:** Pain may contribute to infertility in mares. Pain must be sufficiently improved or resolved first before considering the infertility.

#### Case Example 4

An 11-year-old Dutch Warmblood gelding used for dressage and jumping competitions presented with significant lameness of the right pelvic limb. Four months earlier he had run into a tree injuring this right hind limb but had appeared to recover after four months of rest. When the rider, however, started to train the horse again, the lameness recurred. Initially, oral phenylbutazone<sup>a</sup> relieved the lameness, but six days later the horse presented to a conventional veterinarian with a grade 3/5 right pelvic limb lameness no longer responsive to the drug. Injection of local anesthetic into the right hock joint did not improve the lameness and no abnormalities could be detected via radiography, MRI or scintigraphy. The gelding was then referred for acupuncture. On TCVM examination, the horse was assessed to have a Wood Constitution with adequate quality *Shen*. His pulse was wiry and his tongue purple. His caretaker described him as a good athlete who loved to run and compete, and as being dominant and aggressive toward other horses. On the left, LI-15 to 18 (3/5), BL-13 to 21 and BL-54/*Lu-gu* (2/5) were sensitive. On the right, BL-13 to 21, BL-39 (2/5) and BL-54/*Lu-gu* (4/5) were sensitive. The horse's TCVM diagnosis was therefore *Qi* and Blood Stagnation of the right hip and back. Treatment included the following:

#### Acupuncture:

- DN: BL-67, GB-44, left LI-1, left LU-11
- EA (at 20 Hz for 20 minutes) at the following 5-point pairs: *Shen-shu* + *Shen-shu*; BL-54 + BL-54; *Shen-jiao* + *Lu-gu*; Right BL-53 + BL-35; Right *Da-kua* + *Xiao-kua*
- AA (5 ml of 1000mcg/ml vitamin B12 per point): BL-18, BL-19, BL-40, BL-53, *Lu-gu*

**Chinese herbal medicine:** Modified *Shen Tong Zhu Yu Tang*<sup>b</sup> at 30 grams, PO, BID for two weeks followed by 15 grams PO, BID for two months

**Outcome:** This horse received only one acupuncture treatment. Six weeks later, he had returned to work and the lameness was 95% improved. Later, the horse had a colic episode that was resolved by TCVM. He also had an episode of anhidrosis, which too was resolved by TCVM. Ultimately, over the past 5 years, the horse has become

100% sound for high level competition.

#### CONCLUSION

Acupuncture is effective for the treatment of a myriad of conditions in horses including lameness and poor performance, as accented in this paper, when practiced by skilled, accredited practitioners. Clinical results depend on Pattern diagnosis, dosage of acupuncture (number of acupoints, depth of needle insertion, duration, and frequency), and the method of acupoint stimulation.

#### Declaration of Interest and Funding

**Declaration of Ethics:** Authors declare that they have adhered to the Principles of Veterinary Medical Ethics of the AVMA (<https://www.avma.org/KB/Policies/Pages/Principles-of-Veterinary-Medical-Ethics-of-the-AVMA.aspx>)

**Conflicts of Interest:** Dr. Huisheng Xie is one of the owners of Chi Institute of TCVM and Jing Tang Herbal, Inc.

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#### FOOTNOTES

- Phenylbutazone tablets (1g), generic medication, multiple distributors, USA
  - Body Sore powder, Jing Tang Herbal, Inc., Reddick, FL, USA
  - Epimedium Formula powder, Jing Tang Herbal Inc., Reddick, FL, USA
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