THE PRACTICAL USE OF ACUPUNCTURE FOR EQUINE LAMENESS

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The purpose of this manuscript is to describe the methods I use to diagnose and treat lameness problems in performance horses. I use both traditional western medicine in conjunction with acupuncture, chiropractic, herbal mixtures, and nutritional supplements. The focus of this discussion will be on how acupuncture is used to diagnose and treat sport related injuries. Often, acupuncture is used as the primary therapy, but more frequently I use acupuncture in combination with traditional therapeutic methods.

INTRODUCTION TO ALTERNATIVE AND COMPLIMENTARY MEDICINE

Sports medicine in the equine industry has undergone many changes over the last two decades. Topical therapy of pain, systemic medications, and rest was the most common approach taken to treating sore horses. Intraarticular, (IA), therapy was discouraged based on the assumption that corticosteroids would mask the pain and degrade the joint resulting in the inevitable demise of the equine athlete. New medications were made available for joint therapy that could be administered by themselves or in conjunction with corticosteroids. As a result IA treatments became the mainstay of therapy for many veterinarians. However, the negative connotations associated with IA injections have remained within the industry. In addition, many problems associated with pain cannot be resolved with joint therapy.

There has been a continual search within the equine community to find treatment options that are non-invasive and effective for treating performance related problems. To that end, owners have looked outside of the traditional approaches to therapy and driven the market for “alternative” treatment options. For example:

1) Massage
2) Herbal supplements
3) Animal Communicators
4) Chiropractic
5) Reiki
6) Healing Touch
7) Homeopathy
8) Nutritional Supplements
9) Acupressure/Acupuncture
10) Magnetic Therapy
11) Laser/low level light stimulators (infrared).
12) Heating devices
13) Cooling devices

This list is by no means complete. There are new approaches to treating horses invented every year. There is no standardization of treatment within the above examples; the methods used will vary between practitioners. In addition, the use of these modalities is not well regulated, the skill and training of the individuals performing or advising the therapy is not known. Research typical of what we understand in conventional western medicine has not been widely used to evaluate these treatment options. The variation of therapeutic methods and subjective evaluation of the results does not lend itself to a controlled research project. This fact does not alone invalidate the therapy, but rather, it leaves the veterinary profession struggling for an answer as to what does and what does not work.

The term “alternative therapy” is by itself misleading. It would suggest performing a treatment in lieu of another option. The new term “complimentary therapy” became widely used to avoid the implication that these “non traditional” therapies were used as a replacement to other treatment options. Often the terms are combined, into “complimentary and alternative veterinary medicine, (CAVM).” Practitioners that use both CAVM and traditional western approaches to treating horses prefer the term “integrative medicine”, reflecting the use of both techniques within their style of practice.

Another term that has been used extensively in association with CAVM practitioners is “holistic” medicine. The use of this expression would suggest the practitioner looks beyond the obvious symptom for an underlying cause in addition to problems that may be related to or subsequent to the original insult. I do not believe that the holistic approach is exclusive to practitioners of CAVM. Within the veterinary community, there is an organization: American Holistic Veterinary Medical Association, (AHVMA). Members of this organization may practice more than one type of CAVM modality. By virtue of their organizational name, I expect that the “holistic” term may see continued use.

Certain conditions affecting the performance horse have not been effectively treated using conventional means. Specifically, acupuncture, chiropractic, and herbal therapies have found a niche within sports medicine to treat back pain, muscle soreness, and restrictions in mobility. The following discussion will center on how these treatment modalities can be incorporated into a traditional or conventional equine practice. I firmly believe that additional training in specific CAVM therapies is necessary for their effective application. However, I also feel that certain “cook book” treatments can be readily incorporated into most veterinary practices with a minimal amount of training. At the very least, an understanding of the type of treatments that are offered to your clients will improve your ability to direct them towards therapies that would best meet their needs.

DEFINING THE TREATMENT OPTIONS

Massage: physical manipulation of muscles and tendons by hand or with tools designed for that purpose. Acupressure and massage are likely to produce similar results. It is possible that the increase blood supply of the physical massage may have a healing effect. There is no question that massage, when done correctly, can relieve pain. The controversy is for how long and what long term beneficial effects does it have?

Herbal supplements: Herbs can be classified into two systems: 1) Individual herbs that are used to produce a single effect similar to a prepared medication. 2) Herbal combinations used to treat a pathological condition. For example, Devil’s Claw is used for its anti-inflammatory effects similar to phenylbutazone. Chinese herbal mixes contain numerous herbs that are used to treat an “imbalance” or disease state.

Animal Communicators: It would be nice if our patients could tell us where it hurts.
**Chiropractic:** One of the most popular and growing aspects of CAVM in the equine industry. You can discount it or ignore it at your own peril. The chiropractors are drifting away from the “subluxation” term and now speak more about manual manipulation of the skeleton where a reduced range of motion exists. The science of chiropractic is controversial, but the results are well enough documented that you can be assured it will be a mainstay of equine therapy.

Reiki and Healing Touch: Both of these modalities involve the manipulation, movement, or introduction of energy into a diseased or injured area. The science is difficult to define and for many, this type of therapy is difficult to accept as a valid treatment option.

**Homeopathy:** The use of naturally occurring products in a very dilute formulation constitutes the basic philosophy of homeopathy. The animals own physiology and immune system is used to produce a beneficial reaction to the introduction of these substances by oral ingestion or injection. Homeopathy is widely used in Europe and experiencing rapid growth in North America. Homeopathic products are readily available to the public and not regulated by the government to any great extent. As a consequence, it is misused and abused by the general public. The knowledge to correctly use homeopathic mixtures is very complex and extensive training is necessary.

**Nutritional Supplements:** The addition of nutritional supplements to the horse’s diet has produced a multimillion dollar industry. The list of choices overwhelms both owners and veterinarians. Clearly, certain vitamins and minerals are necessary additions to the diets of many athletes. Joint supplements such as glucosamine have seen huge popularity and can be a viable alternative or addition to more invasive treatment. The biggest problem I see with nutritional supplements is the lack of quality control and proof of efficacy.

**Acupressure/Acupuncture:** Next to chiropractic, acupuncture is the most popular and widely used form of CAVM. The science of acupuncture is under current investigation. Most of the research has been done outside of the western culture. As a consequence, the results of the research have not been accepted by many within the veterinary profession. Although response to therapy may not be the best way to prove efficacy, there is enough positive results seen from acupuncture therapy, I would not discount its benefit to the performance horse.

**Magnetic Therapy:** Magnetic therapy has lost some of its popularity recently. The science of using a magnetic field on a bioelectric system has been well documented. However, the long term effects and stimulation of healing an injured area is not well known. Personal experience has shown that magnets can readily reduce pain when they are in place. However, the pain quickly returns once the magnets are removed. If the magnets can be held in place until the source of pain has resolved through natural healing processes, they may be useful in reducing pain.

**Laser/low level light stimulators (infrared):** The use of laser light or a single band of light stimulation can be used as a non invasive acupuncture technique. In addition, lasers can produce a counter irritant type of effect to stimulate blood supply.

**Heating and cooling devices:** Both hot and cold therapy has been used for decades. The use and benefits of each has been documented in the past. The only thing that changes is the delivery systems.

**Saddle fit and shoeing:** Better understanding of the science of correct saddle fit and corrective shoeing has seen an increase in focus as part of the complete approach to defining a treatment plan for the sore or poor performing equine athlete. Training the horse and rider is also important in allowing a horse to achieve their maximum potential.

Clearly, there are many individuals and aspects involved in maintaining the performance horse. As veterinarians, we may not be able to provide expert knowledge in all areas, but a familiarity of the available options will assist both the owner and veterinarian in determining the best therapeutic plan.

**GENERAL EVALUATION AND PHYSICAL EXAM**

In my practice, each horse is evaluated based on the owner’s complaint, breed, intended use and physical condition of the horse. In the case of a substantially lame horse, diagnostic blocks and various imaging techniques are employed to diagnose the problem and develop a treatment plan. Not all owners are receptive to CAVM and prefer a more traditional approach. However, the opposite situation occurs as well, I am frequently asked to evaluate a limping horse for a “chiropractic” problem when the traditional approach to lameness evaluation would be better suited to defining the problem.

The first step of the examination process is to visually inspect the horse while obtaining a limited amount of history. I would prefer the clients do not try and diagnosis the problem for me as that creates a mental bias that can be misleading. The next phase is to evaluate the horse at the trot or jog on a lead line, followed by flexion tests of all four legs. The final phase of the exam is an “acupuncture exam” where the horse is checked over for sore “acupuncture points” also referred to as trigger points.

**ACUPUNCTURE THERAPY**

Acupuncture philosophy identifies 12 major channels or meridians that cover the majority of the body. Each one of these meridians has been given a name that corresponds to an area of the body or organ system. The metaphorical descriptions of some of the meridians can be confusing, but accept the names as they are for the sake of consistency. Along each meridian there are several points that have been identified in TCM as producing a specific effect on the meridian. It is this effect that promotes resolution of the problem using acupuncture therapy. With respect to lameness, the goal of treating the acupuncture point is to reduce pain. The effect can be local muscle relaxation, release of endorphins, or stimulation of blood supply. TCM has a more esoteric explanation of the benefits of acupuncture, which can better explain some of the systemic benefits of the treatment. The anatomical description of the acupuncture points used in the following section is a typical description found in TCM literature describing the location of acupuncture points. The distance between anatomical landmarks uses the Chinese term “cun”, which roughly translates into “body inch.” For the horse, the TCM “cun” is about the width of a rib, or very close to what we would consider three centimeters. The philosophy behind using the “cun” for measuring distance is to take into consideration the variable size of the patients.
ACUPUNCTURE TREATMENT OPTIONS

The purpose of this section is to describe the methods of how I integrate acupuncture to diagnose and treat lameness problems in performance horses. I use both traditional western medicine in conjunction with acupuncture, chiropractic, herbal mixtures, and nutritional supplements. The focus of this discussion will be on how acupuncture is used to diagnose and treat sport related injuries. Often, acupuncture is used as the primary therapy, but more frequently I use acupuncture in combination with traditional therapeutic methods.

Depending on the location of the point to be stimulated, I may use dry needling, moxabustion, electrostimulation or an injection into the point. The most common method of acupuncture point therapy I use is the latter technique, which is often referred to as “aquapuncture.” I use two different mixtures to inject into an acupuncture point.

1) Vitamin B12 / Sarapin / DMSO
2) 1.8% Iodine in Almond Oil,
   (Similar to a product sold as ‘Hypodermin’)

I do not believe that the exact formulation of the injection is significant in determining the success or failure of treatment. Many acupuncturists have used numerous other mixtures or commercially available injectables with similar results. There are only a few acupuncture points I inject with iodine: LU 1, BL 18, BL 23, GB 30, and medial stifle points. For LU 1, GB 30 and LIV 8, I use a 3.5 inch spinal needle, placing 2 to 3 ml of the iodine mixture into the point. All other points injected I use a 21 gauge by 1.5 inch needle. I use no more than 1 ml of the iodine mixture in BL 18 and BL 23. The points TH 1 and PC 6 are needed only. The remaining acupuncture points are injected with 2 ml of the vitamin B12 mixture.

The Vitamin B12 mixture is prepared as follows:
- 300 ml Vitamin B12, 1000mcg/ml
- 50 ml Sarapin
- 50 ml DMSO, 90% Solution, Medical Grade

The Iodine in Almond Oil can be purchase from several different compounding pharmacies. The original formulation of iodine “internal blisters” was 2%. I prefer a weaker solution that acts as a strong stimulant and I do not desire a “blistering” effect. Therefore I would recommend a mixture that is between 1.6% and 1.8%. I also prefer the “Hypodermin” formula that contains ether. This appears to enhance the dispersion of the injection and reduce local tenderness at the injection site.

ACUPUNCTURE TREATMENT FORMULAS

Rear Leg Lameness And Associated Back Pain:
BL 23, BL 25, BL 27, BL 30, GB 30, GB 33, BL 37, and the extra point above the tuber coxae. If there is stifle joint pain, add Liv 8 and KI 10. (Use 2 to 10 ml iodine mixture in KI 10 for upward fixation of the patella).

For Back Pain:
Treat the points used for rear leg lameness and add:
BL 13 and BL 18

For Front Leg Lameness And Shoulder Pain:
LU 1, BL 13, LI 16, TH 1 and SI 9

For Older Horses With General Arthritic Pain:
Use the appropriate combination for front or hind leg lameness and add BL 11, BL 40, and PC 6.

ANATOMICAL LOCATION OF ACUPUNCTURE POINTS GROUPED BY MERIDIAN:

Bladder (BL):
BL 11
In the depression just cranial to the craniodorsal border of the scapular cartilage, 1.5 cun lateral to the dorsal midline, over the cervical portion of the trapezius m.
BL 13
Three cun lateral to the dorsal midline, at the caudal edge of the scapular cartilage, in the 8th intercostal space, in the muscular groove between the longissimus thoracis and iliofascialis thoracis mm.
BL 18
Three cun lateral to the dorsal midline, this point has two locations: in the 13th and 14th intercostal spaces, in the muscular groove between the longissimus thoracis and iliofascialis thoracis mm.
BL 23
In the depression 3 cun lateral to the dorsal midline, between the spinous processes of the 2nd and 3rd lumbar vertebrae, in the muscular groove between the longissimus lumbrorum and iliofascialis lumbrorum mm. This point is often found on a vertical line from the L2-3 area to the caudal aspect of the last rib.
BL 25
In the depression 3 cun lateral to the dorsal midline, between the spinous processes of the 5th and 6th lumbar vertebrae (4th and 5th if 6th is missing). This point is usually on a line that extends from the dorsal midline to the cranial edge of the tuber coxae (coxal tuber).
BL 27
In the depression 3 cun lateral to the dorsal midline and 1.5 cun lateral to the 1st sacral foramen.
BL 30
In the depression 3 cun lateral to the dorsal midline and 1.5 cun lateral to the 4th sacral foramen.
BL 37
In the muscular groove between the biceps femoris and the semitendinosus mm., 5 cun distal to the tuber ischii (ischial tuber).
BL 40
In the depression at the midpoint of the transverse crease of the popliteal fossa, between the caudal division of the biceps femoris and the semitendinosus mm. This point is found more easily with the stifle flexed.

Extra Point, (Outside Bladder Meridian)
Place the base of your palm on the rim of the tuber coxae, the point can be found near the end of your middle finger as it directed towards the opposite greater trochanter.

Gall Bladder (GB):
GB 30
In the depression caudoventral to the dorsal border of the caudal portion of the greater trochanter, in the biceps femoris m.
GB 33
In the depression midway at the level of the patella and caudal border of the stifle.
Pericardium (PC):
PC 6
In the depression just cranial to the cranial border of the chestnut, midway between the proximal and distal ends of the chestnut.

Small Intestine (SI):
SI 9
In the large depression caudal to the proximal humerus, along the caudal border of the deltoid m. and between the long and lateral heads of the triceps brachii m.

Triple Heater (TH):
TH 1
On the dorsal midline of the front foot, in the depression just proximal to the coronary band.

Large Intestine (LI):
LI 16
In the muscular groove between the cleidomastoideus portion of the brachiocephalicus and omotransversarius mm., just cranial to the subclavius m., ventral to the cervical vertebral column (approximately C6-7).

Stomach (ST):
ST 40
In the depression in the muscular groove between the long and lateral digital extensor muscles, 8 cun proximal to the most lateral prominence of the lateral malleolus of the tibia. This is halfway between the large depression ventral to the ventral border of the patella and between the middle and lateral patellar ligaments (ST 35) and the most lateral prominence of the lateral malleolus of the tibia.

Lung (LU):
LU 1
In the deep depression in the center of the muscle belly of the pectoralis descendens, at the level of the 1st intercostal space.

Liver (LIV):
LIV 8
Posterior to the medial condyle of the femur, in the depression cranial to the insertion of the semitendinosus and semimembranosus mm. and caudal to the saphenous vein.

Kidney (KI):
KI 10
In the depression between the semitendinosus and gracilis mm., at the level of the popliteal fossa.

Illustration of acupuncture points commonly used to treat lameness problems.