



Veterinary acupuncture

Helaine Haltrecht

Introduction

Veterinary acupuncture has been receiving more and more attention all over the world. We are constantly seeing articles in newspapers and features on television dealing with this topic in the human as well as the veterinary domain. Recognition of acupuncture as a complementary form of medicine has resulted in new developments in research, as well as a better understanding of its fields of application and its mechanisms of action.

Presently, acupuncture is being integrated as a valid therapeutic modality in equine, bovine, exotics, and small animal medicine as a complementary treatment to Western veterinary medicine.

In 1988, the American Veterinary Medical Association declared that "veterinary acupuncture and acutherapy are considered valid modalities, but the potential for abuse exists. These techniques should be regarded as surgical and or medical procedures under state and practice acts. It is recommended that extensive continuing education programs be undertaken before a veterinarian is considered competent to practice acupuncture" (1).

The International Veterinary Acupuncture Society (IVAS) was started in 1974. The Society consists of several hundred certified members, with an additional several hundred noncertified members. It was the first of its kind in the Western world to offer postgraduate courses to veterinarians interested in this field. As well, it has been organizing annual conferences all over the world to review the latest research. As of last summer, a new organization, the Association of Veterinary Acupuncturists of Canada (AVAC), has sprouted in Canada. It has approximately 60 members and will soon be offering courses within Canada, as well as organizing annual conferences, the first to be held in Calgary during the 1999 Annual CVMA Convention.

Background

Veterinary acupuncture has a very long history, paralleling that of human acupuncture. It is generally accepted that its practice originated in China, although there is some evidence that acupuncture was practised earlier in an elementary way in the north of India and in Tibet from where it would have made its way to China (2). In any case, the Chinese were the first to classify the points, describe the meridians, and develop the laws of acupunc-

ture from centuries of meticulous observations (2). Legend has it that veterinary acupuncture was discovered, by chance, on the battlefield, when lame horses were found to be sound after being hit by arrows at distinct points.

We now know that veterinarians were practising acupuncture during the Zang and Chow dynasties, around 2000–3000 BCE (2). In 650 BCE, Shun Yang became the first Chinese veterinarian and he can be looked at as the founding father of Chinese veterinary medicine (2).

In 1958, anesthesia by acupuncture was developed by using a mixture of Chinese and occidental methods (Holliday R, IVAS, personal communication). With this event began the popularization of acupuncture in the Western world. In contemporary China, there is not much demand for the treatment in small animals, as possession of these animals is not common. However, acupuncture for large animals is taught and practised widely by Chinese veterinarians.

The term acupuncture comes from the Latin words "acus", meaning needle, and "pungere," meaning to pierce. In fact, the practice of acupuncture consists of the insertion of a special type of needle in precise locations in the body, simply called acupuncture points, with the purpose of preventing and treating disease.

Traditional Chinese medicine, which includes acupuncture, involves a key concept, namely, the balance (or harmony), not only within the body and spirit, but equally involving external factors, such as nutritional, seasonal, meteorological, and sociological.

The concept of health can be considered as a relative and variable state that can be influenced by the environment; thus, a state of health is in a constant state of flux, as it is constantly being subjected to internal and external factors (as Westerners, we can understand and accept this concept when we consider how the change in seasons or light patterns may cause variations in our state of fatigue).

Traditional Chinese medicine uses the symbolic representation of Yin and Yang to elaborate this definition: these symbols represent the dynamic nature of life in all its interrelationships (3). Everything is paired with its relative opposite and represented as Yin or Yang; for example, Yin is cold and humid, Yang is hot and dry. Within veterinary medicine, Yin includes the parasympathetic nervous system and endorphins, Yang includes the sympathetic nervous system and epinephrine. Following this logic, traditional Chinese medicine states that disease will eventually manifest when the body is in

Clinique vétérinaire Dorval, 307, avenue Dorval, Dorval (Québec) H9S 3H6.

a state of imbalance, the causes of which can be multiple. In other words, the body shows signs of illness when there is an imbalance in the rhythmic cycling of Yin and Yang. This is contrary to the Western way of looking at disease, which is focused on specific pathologies.

Mechanisms

The clear and simple objective of acupuncture is to reestablish the harmonious balance of the body when it is in a state of imbalance. But how does it work? We accept that acupuncture has varied physiological effects on all systems of the body, the problem is to determine how these effects are stimulated and by what pathways. Different theories have been advanced; none of these by itself explains all the varied effects observed.

Herewith are some of the proposed theories:

- 1) the neural nonopiate mechanism (Gate theory) (4)
- 2) the hormonal opiate mechanism (5)
- 3) the trigger point mechanism (6)
- 4) the stimulation of local vasodilation (7)

Clearly, the details of these mechanisms are beyond the scope of this article, but we know that acupuncture's effects result primarily from the nervous system. Nerves are stimulated, blood circulation increases, muscle spasms are relieved, and hormones, such as endorphins and endogenous cortisol, are released.

Techniques

Several techniques are used by acupuncturists. They include:

- 1) acupressure — Acupressure is the placement of one's fingers on the surface of the body either in the form of a massage or on precise points. This is the most ancient form of acupuncture. In general, veterinarians don't often use this method, but they may teach their clients how to use it as a complement to their treatment, for instance between 2 treatments.
- 2) acupuncture with needles (needling) — For the treatment of small animals, 28-G to 34-G needles in stainless steel, from 1.25 cm to 5.0 cm in length, are used most frequently. The length of the needle selected will depend on the species and the size of the animal, as well as the location and depth of the point.

I use presterilized disposable needles in my practice, although reusable needles can be used, this being more common in large animals. The animal has to be placed in a comfortable position and owners have to help to restrain their animal in more or less the same position throughout the treatment. From my experience, most animals feel very little or no pain during the treatment, and once the needles have been inserted, frequently relax to the point of falling asleep. I almost never tranquilize my patients. Obviously an aggressive animal does not make an ideal acupuncture patient.

- 3) aquapuncture — One can inject a saline solution, occasionally mixed with vitamin B₁₂. This is the most common method used in horses. In small animals, I use a 25-G, 1.25-cm needle. This method is useful in animals that do not tolerate keeping their needles in for very long (cats), or as a complement to needling.

- 4) electroacupuncture — This method consists of transmitting electrical energy into acupuncture points. Electrical leads are attached to needles already in place.

I use a battery-operated electrostimulator. By this method, the level of analgesia can be increased and the effect of the acupuncture prolonged by increasing the stimulation of the point one is treating. This method is used primarily for chronic pain and, in most cases of osteoarthritis, it is extremely useful when used on the local points surrounding the affected joint.

- 5) implantation — Various materials can be implanted into the tissue near the acupoint to achieve a more prolonged stimulation of acupuncture points. Catgut, stainless steel, or other suture materials can be buried at acupuncture points to provide long-term stimulation. The most commonly used material is sterile gold beads.

Under general anesthesia, the patient is prepared as for any surgical procedure. The site is shaved, cleansed, disinfected, and draped. A 14-G hypodermic needle is inserted into the proper point. The gold beads are inserted through the lumen of the needle into the deeper tissues. A stylet is inserted into the lumen of the needle to keep the beads in place as the needle is removed. This technique has been used to treat osteoarthritis (especially for the hip joint), epilepsy, and intervertebral disk disease.

Owner consultation

Once a complete workup has been done and a diagnosis established, I present the owner with the different options for treatment: surgical, medical (using medications), and acupuncture.

Scenarios for the use of acupuncture

The following situations provide examples of when acupuncture might be considered:

- a) The client finds surgery too expensive and out of the question.
- b) Anesthesia presents a high risk, as a result of a pre-existing condition or for reasons of age. Clearly, this again eliminates the surgical option.
- c) The client prefers to try an alternative therapy, either in preference to using long-term medications or, possibly, as a first choice. Several clients have been treated by these methods themselves with good results; therefore, they are enthusiastic about having them used on their animals.
- d) Long-term medications are not a possibility either because of previously undesirable side effects, for instance, those causing diarrhea or vomiting, or in cases of renal or hepatic insufficiency.

Clients sometimes prefer to try acupuncture before choosing surgery in cases where the choice of surgery is not clearcut. Also, I have often used acupuncture in conjunction with surgery or medications. For example, acupuncture can be used in the postoperative period to accelerate convalescence, or, equally, it can be used either to decrease the frequency of treatment with medications or to decrease the dosage needed to control the problem.

Musculoskeletal conditions that generally respond well to acupuncture include osteoarthritis in most of the joints, hip dysplasia, and immune-mediated joint diseases, such as rheumatoid arthritis, mandibular myositis, and chronic Lyme disease.

Acupuncture can be used to treat thoracolumbar or cervical disk disease. Janssens (8) published the results of a number of studies comparing acupuncture with medical and surgical approaches and found acupuncture to be equally successful in treating chronic intervertebral disk disease.

Neurologic disorders that have responded to acupuncture include idiopathic epilepsy (in those cases that were not well controlled by medication, or in order to decrease the dose necessary to control the seizures), peripheral neuropathies, neurogenic diseases, idiopathic facial paralysis, certain spinal cord injuries with secondary paresis and paralysis, and certain cases of urinary and fecal incontinence.

Contraindications

There are few contraindications to a treatment with acupuncture, as this form of therapy, when used by a trained professional, is unlikely to cause negative effects. The decision to use this technique is generally based on whether it is likely to be beneficial or not. However it is known that there are certain points that are contraindicated in the pregnant patient; similarly electroacupuncture would not be used in a patient with a heart condition or one in a state of extreme weakness or fatigue. On the other hand, acupuncture can still be applied to these patients, using techniques known to apply in these cases.

Protocol

The protocol most often used for chronic problems is once weekly treatments during a period of 4 to 8 wk. Once the condition seems to be under control, the frequency of treatments is decreased, first to intervals of 2 wk, then gradually stretched out to, possibly, every 3 to 6 mo. Depending on the time of year (particularly periods of extreme cold or heat), it is occasionally necessary to see the patient more often. A session of acupunc-

ture usually lasts about 15 min, once the needles are in place.

Conclusion

Acupuncture is a growing field and is now stirring much interest among our clients and within the veterinary profession. My experience is that it is a modality that broadens the options I can offer to my clients and has greatly increased my enjoyment of veterinary practice. With more research being done and with global contact between East and West through the internet, etc. on the increase, there is much to be discovered and learned. Veterinary acupuncture will continue to grow as an effective and safe tool in our arsenal of therapies for our patients.

References

1. La Frana JE. 1990 AVMA Directory. AVMA, Schaumburg, IL.
2. Jagger DH. History and concepts of veterinary acupuncture. In: Schoen AM, ed. Veterinary Acupuncture: Ancient to Modern Medicine. Goleta, California: American Veterinary Publ, 1994: 5-18.
3. Xinnong C, editor. Chinese Acupuncture and Moxibustion. Beijing: Foreign Languages Pr, 1987.
4. Melzack R, Wall PD. Pain mechanisms: A new theory. Science 150: 971, 1965.
5. He LF. Review article: Involvement of endogenous opioid peptides in acupuncture analgesia. Pain 1987; 31: 99-121.
6. Travell JG, Simons DG. Myofascial Pain Syndromes and Dysfunction: The Trigger Point Manual. Baltimore: Williams and Wilkins, 1983.
7. Kendall DE. Part 2: A scientific model for acupuncture. Am J Acupuncture 1989; 17: 343-360.
8. Janssens LAA. The treatment of canine cervical disc disease by means of acupuncture : A review of 32 cases. J Small Anim Pract 1985; 26: 203-210.

Suggestions for further reading

- 1) Schoen AM, Wynn SG, eds. Complementary and Alternative Veterinary Medicine: Principles and Practice. St. Louis: Mosby, 1998 (see page 432 for a review of this book).
- 2) Kaptchuk TJ. The Web That Has No Weaver (Understanding Chinese Medicine). New York: Congdon and Weed, 1983.
- 3) Wong J, Cheng R. The Science of Acupuncture Therapy. Toronto, 1987 (available through M.E.D. Servi-Systems Canada Ltd. 1-800-267-6868).

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