

What Acupuncture Can and Cannot Treat
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Abstract

Acupuncture has been used for over 2,000 years to treat a variety of diseases. It is safe and effective and can be used to treat conditions such as pain, geriatric diseases, and exercise-related diseases. There are 361 acupuncture points located throughout the body on meridians. Meridians are the energetic channels that connect all the points to each other. These points are stimulated by various means to produce a physiological effect on the body. All points have various functions throughout the body that can be used to treat different diseases. Certain cautions must be taken when treating weak, debilitated or pregnant patients.

Introduction

Veterinary acupuncture has been practiced in China for at least 2,000 years.¹ Interest and activity spread to other Asian countries such as Japan and Korea about 1,500 years ago.¹⁻² During the past 25 to 30 years there has been tremendous growth and development of acupuncture in animals in Europe and the United States. Acupuncture has been used to treat diseases in horses, cattle, dogs, cats, and birds and many clinical studies have documented the benefits provided from acupuncture.²⁻⁶ Clinical results from acupuncture vary with the disorder being treated and with the type of acupuncture technique employed. Thus, the goal of this paper is to describe the indications and contraindications of acupuncture in animals.

What is Acupuncture?

Acupuncture may be defined as the stimulation of a specific point on the body, referred to as an “acupoint”. Physiological changes in response to acupuncture point stimulation is the basis of clinical treatment. Some of these changes include release of endogenous opioids, immune system stimulation, and blood pressure regulation. Stimulation of an acupoint causes activation of A α and A β nerve fibers to conduct electrical signals through the spinothalamic tract to the hypothalamus and cause release of β -endorphins. Acupuncture also causes activation of the descending pain inhibitory pathway which activates the periaqueductal gray matter to release more β -endorphins and the nucleus raphe magnus to release serotonin.⁷ Pain is blocked with the release of these endogenous opioids and neurotransmitters. Acupuncture can also activate T-cell lymphocytes and increase the number of white blood cells for the treatment of immunodeficiency.⁸ Acupoint stimulation also affects the blood pressure receptors and can influence blood pressure. It can be used to increase or decrease blood pressure.⁹

Many techniques have been developed to stimulate “acupoints” such as dry-needle, moxibustion, electro-acupuncture, aqua-acupuncture, hemo-acupuncture, acu-pressure and pneumo-acupuncture¹⁰. Dry-needle is the insertion of an acupuncture needle into an acupoint for stimulation of that point. The needles are filiform, sterile and of varying widths and lengths. Dry-needle is the most common treatment modality used in veterinary medicine. Moxibustion is a form of stimulation that works by warming the acupoint and causing activation of the point. It uses crushed dried leaves of *Artemisia argyi* rolled into a cigar-shaped fashion. The herb is

burned and then placed over an acupoint without touching the skin. The warming effect of the burned herb causes stimulation of the acupoint. Electro-acupuncture is the attachment of electrical leads to dry-needles and connection to an electro-acupuncture machine. The purpose of using the electro-acupuncture machine is to control the frequency and amplitude applied to each point. This allows for more effective stimulation than dry-needle alone. Aqua-acupuncture is the injection of a soluble, sterile medium into acupoints. The purpose is to provide a constant stimulation via the pressure induced by the liquid injected into the acupoint. The most commonly injected substances are sterile water, saline, or vitamin B12. Hemo-acupuncture is performed by inserting a hypodermic needle into a blood vessel that contains an acupoint to draw a few drops of blood. The purpose of this modality is to release heat from the body. Acupressure is the use of one's fingers to apply direct pressure to an acupoint. Each point requires about 5-10 minutes of constant pressure for stimulation. Pneumo-acupuncture is the injection of fresh air into an acupoint. The pressure created by the air bubble within the subcutaneous tissues causes stimulation of the acupoint. This modality can be used for muscle atrophy of the hip or shoulder.

Acupoints

There are 361 acupoints located on 14 meridians throughout the body. There are four types of acupoints: motor points, midlines points, nerves or nerve plexuses points, and muscle-tendon junction points¹¹. The motor points are located where a nerve enters a muscle. The midline points are located on dorsal and ventral midlines. There are points over nerves and nerve plexuses. And there are points at muscle-tendon junctions where the Golgi bodies exist. Most of the acupoints are located on meridians. Meridians are energetic channels located throughout the entire body that form a connection between acupoints. There are 14 meridians named liver (LIV), gallbladder (GB), heart (HT), small intestine (SI), pericardium (PC), triple heater (TH), spleen (SP), stomach (ST), lung (LU), large intestine (LI), kidney (KID), bladder (BL), governing vessel (GV), and conception vessel (CV). Each point is named by its meridian and its corresponding number. For example, the liver meridian has 14 points and the third point on that meridian is called LIV-3.

Applications of Acupuncture in Animals

Acupuncture can be used for a variety of clinical conditions in animals, especially chronic diseases. Acupuncture is most commonly used in three areas, namely pain management, geriatric medicine, and sports medicine. Acupuncture is reportedly effective for the treatment of various painful conditions in animals including cervical, thoracolumbar and lumbosacral hyperpathia, chronic lameness, degenerative joint diseases, and colic.^{2-6, 12-13} Acupuncture stimulation produces an analgesic effect, generally called acupuncture analgesia.¹⁴ The release of endorphins may be one of the pathways in which acupuncture relieves pain.¹⁵⁻¹⁶ Geriatric patients suffer from a variety of conditions that can be treated with acupuncture. Many geriatric patients have generalized pain, arthritis, hind end weakness, and chronic diseases that hinder their quality of life. Some of these patients are also too weak to undergo conventional therapy and thus require an alternative to treatment that is safe and effective. Acupuncture can effectively treat geriatric patients and improve their quality of life.¹⁷ Animals can suffer from exercise-related diseases such as chronic pain, arthritis, injury to tendons and ligaments, joint injuries, muscle injuries, and bone injuries. Acupuncture can treat these diseases by relieving pain and promote healing to the affected areas by increasing blood flow.¹³⁻¹⁶

Safety of Acupuncture

As compared with other modalities of therapy, acupuncture is much safer because of dual-direction regulation.¹⁻² This means when an acupoint is stimulated, the physiological response induced matches the body's need at the time. An example of dual-direction regulation can be demonstrated through the use of two acupoints (BL 21 and GV 1). These two points address gastrointestinal motility and may be used in either an animal that is constipated or that has diarrhea.^{1,10}

Cautions and Contraindications

Certain cautions must be taken when treating weak or debilitated patients. The use of fewer acupoints are used for weak or geriatric animals. When treating performance animals, wait a couple of hours after training or racing sessions before starting any acupuncture treatment. Acupoints around the thoracic cavity (e.g., BL-13 to BL-17) require an insertion distance for the needles that is shorter for other acupoints. Be cautious when using moxibustion in the summertime because it warms the body and might lead to too much heat. Be cautious when using hemo-acupuncture in the wintertime because blood loss can lead to a cooling of the body. Be cautious when using points around the eyes as to not puncture the globe. Although rarely a problem in animals, electro-acupuncture must be done very cautiously in patients with pacemakers.

There are no specific diseases that cannot be treated with acupuncture. However, there are certain contraindications of needle insertion based on the location of the acupoint or health status of the patient. Contraindications for certain applications of acupuncture include the following: 1) never insert a needle directly into a tumor or open wound, 2) never use a needle at acupoint CV-8; only moxibustion is used at CV-8, 3) never use certain acupoints (i.e., ST-36, SP-6, BL-40, BL-60 and BL-67), as well as points around the lumbar and lower abdominal regions during pregnancy, 4) never use electro-acupuncture on seizure patients, 5) never use hemo-acupuncture on weak or geriatric animals^{1,10}.

Conclusion

Acupuncture can be used to treat a variety of diseases including pain, geriatric diseases, and exercise-related diseases. Different acupoints and different methods of stimulation can be employed to treat specific diseases. Although few, there are cautions and contraindications to using acupuncture therapy. Therefore, it is highly recommend that a licensed veterinarian take a course certifying them in veterinary acupuncture before implementing it as part of their practice. With the increasing amount of clinical trials and research being performed using acupuncture therapy, we have a better understanding of acupuncture's mechanism of action. Also, our animal patients greatly benefit from this recent understanding and application.

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