

Outcome of 119 dogs and cats treated at the acupuncture unit of the Faculty of Veterinary Medicine and Animal Science of the University of São Paulo State, Botucatu city, Brazil

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Abstract

The veterinary acupuncture unit started in 2000 at Faculty of Veterinary Medicine and Animal Science – University of São Paulo State, Brazil. During 2001 and 2002, 119 veterinary patients were treated including dogs (112) and cats (7), males (64) and females (55) with a mean age of 5.9 years. The treatments included the use of acupuncture, eletroacupuncture, moxibustion, gold implant, homeopathy, Chinese herbs and its associations. The majority of animals were crossbred dogs and small breed dogs such as teckels, pinschers and poodles. Cases were referred from colleagues of the Veterinary Hospital with several diseases such as neurological, musculoskeletal, skin, gastrointestinal, neoplasias, liver, kidney, lung, ear, eye, blood and reproduction diseases. All animals had a recovery rate of 63% after a mean of 7.6 weekly acupuncture sessions per animal, 10% died of unrelated diseases during treatment, 38% did not go on with the acupuncture sessions and 14% are still under treatment. The main diseases treated were neurological (63%) and musculoskeletal related problems (10%) or its associations (7%). For the neurological diseases, 65.8% of the animals treated got better after treatment, 15% are still being treated and 18% did not go on with the treatment. From the animals treated for musculoskeletal problems, 75% got better with the treatment, 8.3% are still under treatment. These data show that routinely the principal indications for acupuncture are neurological and/or musculoskeletal related diseases and that we obtained a mean of 79.6% of recovery in these neurological and/or musculoskeletal patients.

Key-words:

Acupuncture.
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Introduction

Although there is a continue debate concerning the efficacy of acupuncture, this therapy is gaining increased clinical acceptance for the alleviation of diseases of various aetiologies, particularly musculoskeletal and chronic pain.¹ Acupuncture has been used for the treatment of several diseases such as neurological², musculoskeletal³, dermatological⁴, reproductive⁵, respiratory⁶ and gastrointestinal problems^{7,8}, otitis⁹ and others.

Acupuncture is a therapeutic method

that uses physical and chemical stimulus on certain areas of the skin (acupoints) to stimulate body homeostasis. The most common forms used to promote the desired effects on veterinary patients are needle acupuncture – needles inserted into acupoints, electroacupuncture – electric stimulus through needles inserted into acupoints or transcutaneous electrical stimulation without use of needles, moxibustion – heat stimulus using an herb known as *Artemisia vulgaris*, aquapuncture – injection of solutions into acupuncture

points, and gold implant – gold implanted into the tissue near the acupoints to achieve a more prolonged stimulation.¹⁰

Musculoskeletal disorders are common in dogs and cats. Often, the inability of the animal to walk without considerable effort and pain may be the usual reason that ultimately persuades the owner to elect euthanasia. It is not uncommon to see patients for whom analgesia and anti-inflammatory medications either are ineffective or produce side effects and for whom surgical intervention either would not be beneficial or would involve risks associated with other pre-existing conditions.¹¹

According to Balaji et al.³ the combination of the acupuncture points LI 1 (Shanglian); TH 9 (Sidu); H7 (Shenmen); GB 34 (Yang Ling Quan); St 36 (Tsu San Li) and SP 6 (San Yan Jiao) produced complete recovery from muscle injuries on the 21st day in dogs after a controlled macroscopical and microscopical study of the muscle tissue.

The beneficial effects of acupuncture for treatment of musculoskeletal disorders are not simply associated with analgesia secondary to endorphin release, but are also related to increased local vasodilation and antiinflammatory effects, in addition to release of trigger points and relief of stiffness.¹¹

Similarly to musculoskeletal disorders, acupuncture has been used successfully for treatment of a variety of neurologic disorders in pets. Factors to consider include clinical signs, type of neurologic disorder, and efficacy of conventional versus acupuncture treatment, financial constraints, and ethical issues¹².

Signs of neurologic dysfunction are associated with impaired electrical transmission of the nerve impulse.¹³ Varying degrees of paresis to paralysis of muscle function occur from this impairment, including peripheral neuropathies, degenerative myelopathy, megaesophagus, and neurogenic fecal and urinary incontinence.¹²

One goal of acupuncture is to restore

normal transmission of impulses.¹³ Acupuncture's ability to improve impaired function is less well understood than its analgesic effects.¹² It reduces the resistance and enhances electrical activity of injured tissues, thereby promoting healing and axonal regrowth.¹⁴ Other nervous system disorders resulting from impaired function include epilepsy and sensorineural deafness. Experiments demonstrated that opioid peptides, serotonin, and g-aminobutyric acid are important brain neurotransmitters underlying the anti-epileptic effect of acupuncture.¹⁵

Sumano, Bermudez and Obregon² showed that electroacupuncture was four times more effective in the treatment of wobbler syndrome in dogs when compared with conventional treatment alone.

Carlsson e Sjolund¹⁶ demonstrated that acupuncture had a longer pain-relieving effect when compared to placebo in human patients with chronic nociceptive low back pain. Leibing et al.¹⁷ reported a significant improvement produced by traditional acupuncture in chronic low back pain in humans compared to routine care (physiotherapy) but not compared to sham acupuncture.

According to Schwartz⁶, acupuncture offers an excellent addition to therapeutic options in treatment of chronic respiratory disorders on dogs and cats by improving overall patient health and treating underlying pathologic patterns.

Motility disturbances of the small intestine are present in various diseases and the control of such disturbances represents a goal of many therapeutic interventions in both Western and Eastern medicine.⁸ Tabosa et al.⁸ demonstrated a clear positive effect on intestinal myoelectric activity of Wistar rats when stimulating acupoints St 36 (Zusanli) and SP 6 (Sanyinjiao), and Luna e Joaquim⁷ demonstrated a gastrointestinal motility improvement in dogs using St 36 and LI 4.

Sanchez e Puchi⁹ suggested that acupuncture stimulates animal defensive

systems increasing the conventional treatment effect. Conventional treatment seems to work mainly against the invading agent while acupuncture seems to act by reinforcing the host's defensive barriers.

Acupuncture for reproductive disorders in domestic animals can have rewarding results. Sometimes, it is better to combine acupuncture with Western drugs/hormones or Chinese herbal remedies.⁵

Materials and Methods

Data was collected from 119 dogs and cats referred from colleagues of the Veterinary Hospital at the University of São Paulo State – Brazil, to the acupuncture unit during 2001 and 2002. Dogs (112) and cats (7) were analyzed according to breed, sex,

age, disease, number of acupuncture sessions, kind of treatment (acupuncture, eletroacupuncture, homeopathy, moxibustion, gold implant, and their associations) and recovery rate. It was considered for the recovery rate only animals that had at least 50% of improvement on clinical signs according to the owner's evaluation and clinical evaluation of at least two veterinarians. Most of the treatments were performed once a week, during 20 minutes.

Results

From the 112 dogs and 7 cats treated, 64 were males and 55 were females with a mean age of 5.9 years. The treatments included the use of acupuncture,

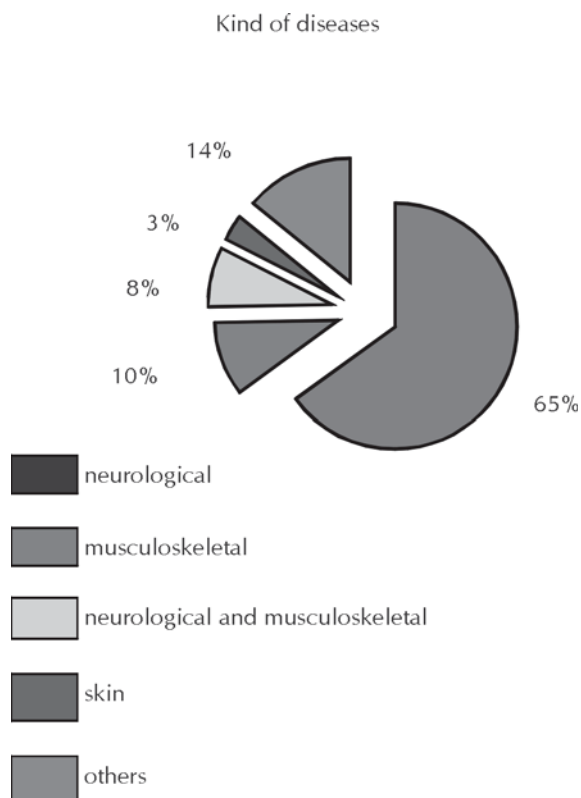


Figure 1 - Percentage of animals treated for neurological and/or musculoskeletal disorders, skin diseases and other problems at the acupuncture unit of the University of São Paulo State, Brazil, during 2001 and 2002. (page 3, after paragraph 2)

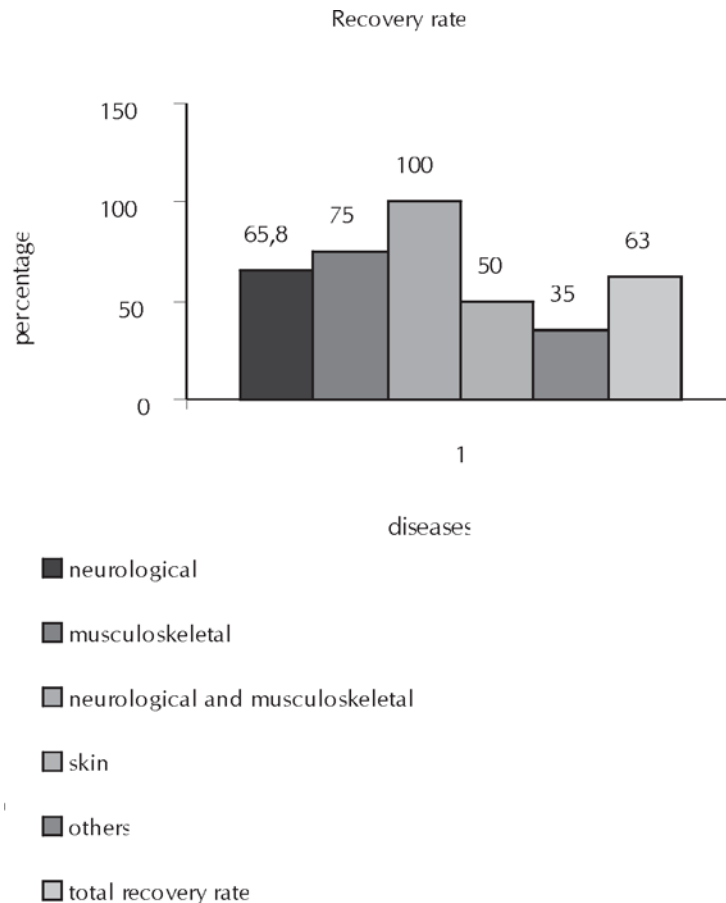


Figure 2 - Recovery rate of the 119 dogs and cats treated at the acupuncture unit of University of São Paulo State – Brazil during 2001 and 2002. (page 3, after paragraph 3)

electroacupuncture, moxibustion, gold implant, homeopathy, Chinese herbs and their associations. The majority of animals were crossbred dogs (32%) and small breed dogs such as teckels (11.7%), pinschers (9.2%) and poodles (9.2%). The large breed dog most treated was German shepherd (10.1%).

Cases were referred from colleagues of the Veterinary Hospital with several diseases such as neurological (65%), musculoskeletal (10%), skin (3%), gastrointestinal (0.8%), neoplasias (3.3%), liver (1.6%), kidney (1.6%), lung (1.6%), ear (2.5%), eye (2.5%), blood (0.8%) and reproduction (2.5%) diseases (Figure 1). All 119 veterinary patients had a recovery rate

of 63% after a mean of 7.6 weekly acupuncture sessions per animal, 10% died of unrelated diseases during treatment, 38% did not go on with the acupuncture sessions and 14% are still under treatment.

The main diseases treated were neurological and musculoskeletal related problems or their associations (80%). When neurological diseases were considered, 65.8% of the animals improved after treatment (Figure 2), 15% are still being treated and 18% did not go on with the treatment. In this case, 91% were treated just with acupuncture and/or electroacupuncture and the mean number of acupuncture sessions was 7.8 per animal.

For musculoskeletal disorders, 75% of the animals improved with the treatment,

8.3% are still under treatment and 16% did not go on with the treatment. In these animals, 58.3% were treated just with acupuncture and/or eletroacupuncture with a mean number of treatments of 8.1 sessions per animal. When there was a combined musculoskeletal and neurological problems, the recovery rate was 100% (Figure 2). The neurological and/or musculoskeletal patients had together a recovery rate of 79.6%.

Discussion

The veterinary acupuncture unit started in 2000 at Faculty of Veterinary Medicine and Animal Science – University of São Paulo State, Brazil and as mentioned by many authors described above and as we routinely observed since then, acupuncture has been used to treat many disorders, but mainly the musculoskeletal and neurological ones.

Shoen¹¹ recommends an initial protocol for chronic musculoskeletal problems that consists of acupuncture treatments 1 to 2 times a week for at least 3 to 5 weeks, with some response often seen within the first 2 to 4 treatments. Similarly to this author, the animals at our routine are treated once a week until a satisfactory recovery is achieved or until total recovery is observed depending on the degree of severity of the disorder. The acupuncture sessions are then performed once a week followed by every other week, and once a month, until the end of the treatment.

We observed that musculoskeletal disorders were the second indication for acupuncture treatment (10%) and that an effectiveness of 75% was achieved, with the animals getting better after 2 to 43 acupuncture sessions. According to Barlas et al.¹, sometimes acupuncture might have little effect on cardinal signs and symptoms of delayed onset muscle soreness. The main musculoskeletal disorders treated were hip displasia (including gold implants) and osteoarthritis, and several times we received the animals for acupuncture treatments after

many other Western medicine treatments. Maybe that was the reason why some of them had a long recovery.

Nervous system disorders can result in pain or impaired function. The pain results from pathologic processes of the meninges, ligaments, dorsal nerve roots, and periosteum of the vertebral channel through stimulation of pain receptors. The major clinical application of acupuncture is for painful conditions.¹⁸ Similar to Kline, Caplan and Joseh¹², the most common neurologic disorder treated was pain and hind limb paresis or paralysis associated with intervertebral disk disease. Other neurological diseases treated were seizures, distemper, facial paralysis, cervical subluxation or pain, cauda equina syndrome, and wobbler syndrome.

The neurological disorders were the first group of pathologies attended at our service (63%), and these animals received from 4 to 48 acupuncture sessions to partial or full recovery. As observed by Kline, Caplan and Joseh¹², intervertebral disk disease, cervical vertebral instability and cauda equina syndrome responded similarly to acupuncture and the neurologic disorders causing pain responded faster, usually within the first 5 treatments, whereas those animals with impaired function responded within the 8 or more treatments.

From the 4 cases of skin diseases, only 2 patients improved after 6 to 11 acupuncture sessions. Acupuncture is indicated for the treatment of several kinds of dermatologic problems.^{4,19} The dermatologic patient is always a difficult patient to treat because the skin is associated with internal organ systems and reflecting pathologic processes that are either primary or shared with other tissues.¹⁹

The ability of acupuncture to increase gastrointestinal motility in humans and animals has been well documented during the past years.^{7,20,21} Just one case of post-surgical constipation was treated in a dog, and the animal was normal after 3 acupuncture sessions. There was a high incidence of patients that did continue the

acupuncture treatments (38%), but the majority of these animals had improved when the owners stopped bringing them. One possible explanation is the distance from their cities to the university or simply because the owners were happy with the animal walking or without pain, and were satisfied with the result.

Conclusions

These data show that the greatest

number of cases at our hospital was neurological and/or musculoskeletal related diseases and a mean of 79.6% of recovery was obtained.

Acupuncture is still underestimated as part of the treatment of many other diseases at the Veterinary Hospital of the University of São Paulo State, especially gastrointestinal and skin diseases and it seems that Traditional Chinese Medicine has a lot to contribute for the treatment of veterinary patients.

Resultado do tratamento de 119 cães e gatos atendidos pelo serviço de acupuntura da Faculdade de Medicina Veterinária e Zootecnia da Universidade Estadual Paulista, Botucatu, Brasil

Resumo

O serviço de acupuntura veterinária foi iniciado no ano de 2000 na Faculdade de Medicina Veterinária e Zootecnia – Universidade Estadual de São Paulo, Brasil. Durante os anos de 2001 e 2002, 119 pacientes veterinários foram tratados incluindo cães (112) e gatos (7), machos (64) e fêmeas (55) com idade média de 5,9 anos. Os tratamentos incluíram o uso de acupuntura, eletroacupuntura, moxibustão, implante de ouro, homeopatia, ervas chinesas e suas associações. A maioria dos animais era sem raça definida e de raças de pequeno porte como teckels, pinschers e poodles. Os casos foram encaminhados por colegas do Hospital Veterinário para tratamento de vários problemas, tais como neurológicos, musculoesqueléticos, dermatológicos, gastrointestinais, neoplasias, doenças hepáticas, renais, pulmonares, auditivas, oftalmológicas, sanguíneas e reprodutivas. Ao todo, os animais tiveram uma taxa de recuperação de 63% após 7,6 sessões semanais de acupuntura em média, 10% vieram a óbito por causas não relacionadas ao motivo do tratamento, 38% não continuaram com as sessões e 14% ainda estão sob tratamento. As doenças mais tratadas foram neurológicas (63%) e/ou musculoesqueléticas (7 e 10%, respectivamente). Nas doenças neurológicas, 65,8% dos animais tratados melhoraram, 15% ainda estão sob tratamento e 18% não continuaram. Nas doenças musculoesqueléticas, 75% dos animais melhoraram e 8,3% ainda estão sob tratamento. Estes dados nos mostram que as principais indicações para o uso da acupuntura em nossa rotina são doenças neurológicas e musculoesqueléticas; e que nós obtivemos uma taxa média de recuperação desses pacientes de 79,6%.

Palavras-chave:

Acupuntura.
Eletroacupuntura.
Cães.
Gatos.

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