

Effectiveness of a combined treatment of dry needle acupuncture and NSAIDs versus solely using NSAIDs on improved mobility for arthritic canines

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Introduction

Arthritis affects approximately 5% of the canine population.

One of the most common treatments for osteoarthritis is NSAIDs.

- However, these can cause adverse effects, which is leading to increased pursuit for alternative therapies.

Groups such as World Small Animal Veterinary association, American Association of Feline Practitioners, and American Animal Hospital Association suggest pain management guidelines that considered acupuncture as a part of multimodal pain management regimen.

Acupuncture may help to reduce the dosage of NSAIDs and therefore reduce the adverse effects, this is a promising alternative for canine's resistant to pain medication or cannot tolerate their side effects. Acupuncture has been found to provide immediate and cumulative effects, following repeated treatments.



https://ohmydogblog.com/wp-content/uploads/2016/08/IMG_20160816_164054.jpg

NSAIDs on improved mobility for arthritic canines

Hypothesis

- H0- Dry needle acupuncture, with NSAIDs, will show no difference of mobility in mild/moderate arthritic canines versus solely NSAIDs.
- H1- Dry needle acupuncture, with NSAIDs, will increase mobility in mild/moderate arthritic canines versus solely NSAIDs.
- H2- Dry needle acupuncture, with NSAIDs, will decrease mobility in mild/moderate arthritic canines versus solely NSAIDs.

Methods

A prospective cohort study will be performed.

Participants will include canines with mild to moderate arthritis in the elbow joint. The participants level of arthritis will be confirmed by the osteoarthritis grade scale. The participants will also be prescribed Metacam or carprofen prior to and for the duration of the study.

- The experimental group will be dogs of owners that have elected to receive a combination of dry needle and NSAIDs.
- The control group will be dogs of owners that have elected to receive only NSAIDs.

Participants will be recruited by local veterinary clinics and current clients with the veterinary school's clinics, advertisements through the vet school's websites and email advertisements to other academic programs at the school, direct advertisements to newspapers, and promotions of the study on school's social media sites.

Exclusions include canine's receiving additional treatments, such as supplements or other therapies, canines with severe arthritis, or if the canine develops an additional condition that would impact the results of the study.

The study will have a duration of three years. Canines will be involved in the study for 24 weeks and be tested biweekly using the lameness scale and a pressure plate.

OA Grade	Description
1	Suspicion based on history Recognised incongruity No OA changes on radiographs
2	Mild clinical signs Discomfort on examination of joint Early OA changes on radiographs
3	Moderate clinical signs Reduced range of motion of joint & crepitus Moderate OA changes on radiographs
4	Overt clinical signs Crepitus, thickening of the joint & pain Obvious OA changes on radiographs
5	Pronounced clinical signs Severe joint changes on palpation End stage joint disease on radiographs

Figure 2: Lameness scale (Chart by Nganvongpanit, Boonsri, Sripratak, & Markmee, 2012)

Criterion	Grade	Clinical evaluation
Lameness	1	Walks normally
	2	Slightly lame when walking
	3	Moderately lame when walking
	4	Severely lame when walking
	5	Reluctant to rise and will not walk more than five paces

Figure 1: Osteoarthritis grade Scale (Chart by 5x5x5 The Management System for Canine Osteoarthritis, n.d.)

Discussion

Multiple studies have found NSAIDs to cause adverse effects and suggest finding other treatment methods to reduce or remove the need to use NSAIDs as treatment for arthritis.

- It is anticipated that multimodal treatment of dry needle acupuncture with NSAIDs will improve mobility of arthritic canines.

The methods design is set up to prevent bias by using the pressure plate and having outside observers determine lameness.

With this study being one of the few studies involving dry needle acupuncture, future experiments will be important for future comparison of treatment options and the effectiveness of dry-needle acupuncture on arthritis.

This study will only include canine's currently taking Metacam and carprofen. However, future studies should consider using other types of low-dose NSAIDs.

Future studies could also compare the effectiveness of dry needle acupuncture to other forms of alternative therapies.

This study is important for starting the discussion on the impact of dry needle acupuncture for multi-modal treatment plans treating arthritis.

Literature cited



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