PEMF therapy in the treatment of canine osteoarthritis: preliminary results

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INTRODUCTION

The purpose of this study is to evaluate the analgesic and anti-inflammatory effects of the pulsed electromagnetic field (PEMF) in the treatment of osteoarthritis (OA) in dogs.

MATERIALS AND METHODS

For this study, only dogs showing lameness for at least four weeks were chosen. Radiographic evidence of OA in one or more joints was also required. Other factors of exclusion were: systemic diseases, infectious arthritis, pregnancy, and treatments with anti-inflammatory drugs in the last two weeks.

20 dogs of different breeds with 27 OA joints (11 elbows, 8 knees, 5 hips, 2 shoulders and 1 carpus) were enrolled in treatment sessions at least 3 times per week, for a total of 20 sessions. Owners were asked not to give any anti-inflammatory drugs, nor to change their dogs dietary and environmental habits, and to report any health problems which might occur during the study period.

Lameness, pain on manipulation and palpation, and range of motion were evaluated at the beginning of the therapy (T0), at the tenth session (T10), at the end (T20), and re-evaluated after 4 and 12 months.

Dogs were laid on a pulsated magnetic field mat with cyclic frequency (3-22-250-500-750-1000 Hz) and 0.75 microT intensity for 10 minutes, and then a small pad was applied on the affected joint for 8 minutes.

RESULTS

The majority of the dogs improved with PEMF treatment with respect to their baseline lameness and pain values, and this was already obvious at half therapy (T10). The benefits were maintained without using anti-inflammatory drugs. The decrease of pain impacted positively on the dogs health-related quality of life, and on their owners’ high grade of satisfaction.

CONCLUSION

PEMF is a non-invasive remedy, lacking in adverse effect, easy to employ, and useful for controlling pain and inflammation associated with osteoarthritis.