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Clinical results of radial shockwave therapy for the treatment of osteoarthritis in dogs

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Purpose: This clinical study investigates Radial Shock Wave Therapy (RSWT) as a non-invasive treatment modality to manage pain and increase mobility in dogs with osteoarthritis. Initial reports of the effects of Radial Shock Wave Therapy (RSWT) on humans, horses and dogs⁽¹⁻³⁾ suggest that this modality could relieve pain and promote healing without significant adverse effects especially when medications are not tolerated well.

Materials and Methods: Noblesville Veterinary Clinic (NVC) recruited 26 osteoarthritic dogs for this study. All cases were chronic (duration greater than 1 month), treated conventionally during this time with lameness still present. Prior to entering the study, all subjects demonstrated OA on radiographs and with discernible lameness (evaluated by a veterinarian scaled 0-4, based on visual gait analysis from mild to severe). Subjects ranged in age from 1-15 yrs (mean 9.7 yrs). Within this group of 26 patients with 61 chronic lameness conditions, there were 12 cases of elbow OA, 30 cases of hip dysplasia and/or OA of the coxofemoral joint, 14 cases of stifle OA, 4 cases of spondylosis, and one shoulder OA case. Owners were asked to complete a questionnaire at pre-treatment and each subsequent visit. Lameness was rated by a veterinarian at every visit using gait analysis and range of motion (ROM). In three sessions 7-10 days apart 2,000 radial shockwaves were applied to each affected joint using the Swiss DolorClast Vet[®].

Results: All patients tolerated Radial Shock Wave Therapy very well without sedation. Side effects such as temporary swelling, edema, and petechia disappeared 24 hours post treatment. At a recheck exam at least 1 week after treatment completion (n=26), the majority of the dog owners (82.8%) rated movement improved. Veterinary rating agreed (79.3% improved). Many dogs (38.5%) had reduced lameness on veterinary rating by at least one full grade of lameness with some (n=2) showing no lameness at all. ROM improved in 89.7% of treated joints by 5-60 degrees (n=39, mean 15.8 degrees).

Discussion: Radial Shock Wave Therapy shows great promise as a non-invasive and relatively pain-free alternative for the treatment of canine OA. Although further study is needed to establish a comprehensive list of standard indications, RSWT was effective in decreasing pain and increasing ROM for dogs with mild to severe osteoarthritis.

References:

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