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**CLINICAL RESULTS OF RADIAL SHOCKWAVE THERAPY
FOR THE TREATMENT OF OSTEOARTHRITIS IN DOGS.**

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Introduction: Initial reports of the effects of Radial Shockwave Therapy (RSWT) on humans, horses and dogs with osteoarthritis (OA) suggest that this modality could relieve pain and promote healing without significant adverse effects⁽¹⁻³⁾. We hypothesize that for dogs with OA RSWT can 1) relieve pain and increase mobility and 2) increase range of motion (ROM).

Materials and Methods: Noblesville Veterinary Clinic (NVC) recruited 26 dogs with OA 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 +/- 3.1). 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 goniometry to measure ROM. In three sessions 7-10 days apart 2,000 radial shockwaves were applied to each affected joint using the Swiss DolorClast Vet[®] Master.

Results: All patients tolerated Radial Shockwave 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 assessment agreed this rating (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 19.4 degrees +/- 5.0 degrees).

Conclusions: Radial Shockwave Therapy shows great promise as a non-invasive and relatively pain-free alternative for the treatment of canine OA especially when medications are not tolerated well. Although further study is needed to establish a comprehensive list of standard indications, RSWT was effective in managing pain non-invasively and increasing ROM for dogs with mild to severe osteoarthritis in dogs.

References: ¹Siebert W, Buch M Extracorporeal Shockwaves in Orthopaedics. Berlin, Heidelberg: Springer-Verlag 1998.

²Palmer SE, Treatment of Dorsal Metacarpal Disease in the Thoroughbred Racehorse with Radial Shockwave Therapy. *AAEP 2002 proceedings* 48:318-321.

³ Danova NA, Muir P Extracorporeal Shockwave Therapy for supraspinatus calcifying tendinopathy in two dogs. *The Veterinary Record*, February 15, 2003, 208-209

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