

for diagnosis of musculoskeletal injuries in human medicine has increased in recent years, PET-CT has not been thoroughly investigated for its utility in the diagnosis of canine lameness. This prospective, descriptive case series evaluated PET-CT findings in dogs presented for thoracic or pelvic limb lameness. We hypothesized that PET-CT would aid the diagnosis of muscle or tendon injuries. Twenty-three client-owned dogs were enrolled in the study. All dogs had a visible lameness without a definitive cause. Dogs with obvious pathology (such as cranial cruciate ligament disease or other obvious, palpable joint pathology) were excluded. All dogs with soft tissue injuries or noninfectious-inflammatory disease ($n = 6$) had PET findings related to the clinical diagnosis, while only 66% (4/6) of these dogs had signs of pathology on CT. The 2 diagnoses made based on PET imaging only included a flexor carpi ulnaris muscle tear and increased uptake in the psoas major muscle. Clinically relevant osteoarthritis was diagnosed via CT in 8 dogs, compared to PET detection of abnormality in only 75% (6/8) of these dogs. 18F-FDG PET is a sensitive imaging modality that may detect subtle metabolic abnormalities in the musculoskeletal system leading to a diagnosis. The combination of PET-CT is recommended to increase the specificity of the PET findings and to provide specific imaging diagnoses.

Pilot Study on Pharmacokinetics, Safety, and Clinical Efficacy of Cannabidiol (CBD) Treatment in Osteoarthritic Dogs

Lauri-Jo Gamble, Christopher Frye, Erin Berthelsen, Sabine Mann, Joseph Wakshlag

Cornell University, College of Veterinary Medicine, Ithaca, New York

In the absence of an ideal treatment for chronic pain associated with osteoarthritis in dogs, there is interest in the potential effect of cannabinoids. The objective of this placebo-controlled double-blind cross-over study was to evaluate the efficacy of cannabidiol (CBD) oil in dogs with multi-joint osteoarthritis. Eleven client-owned dogs with radiographically confirmed evidence of osteoarthritis were recruited. Dogs randomly received CBD oil twice daily (2 mg/kg) or placebo oil for 4 weeks followed by a 2-week washout period between treatments. Veterinary assessment of lameness and response to manipulation as well as owner questionnaires (Canine Brief Pain Inventory [CBPI], Hudson activity scale) were completed at weeks 0, 2, and 4 for each treatment. Chemistry and CBC were performed at each visit and potential side effects were monitored throughout the study. CBPI and Hudson scores showed a significant decrease in pain and increase in activity at week 2, with only significant increases in activity at week 4 for CBD treatment ($P \leq .01$). No major side effects were reported by the owners. Alkaline phosphatase (ALP) increased over time for 8 dogs while receiving CBD oil, reaching significance at week 4 ($P \leq .01$).

Until further long-term safety data are obtained, liver enzyme values should be routinely monitored while dogs are receiving cannabidiol treatment. This pilot study, though short in nature, suggests that CBD oil may help increase comfort and activity in dogs with osteoarthritis.

Use of a Needle Arthroscope to Perform Standing Arthroscopy of the Fetlock in Clinical Cases: Preliminary Results

Alvaro Garcia Bonilla

Department of Clinical Sciences, University of Montreal, Saint Hyacinthe, Quebec, Canada

This study was performed to describe the use of a needle arthroscope in clinical cases with osteochondral fragmentation in the fetlock joint. We hypothesize that the needle arthroscope will allow optimal arthroscopic evaluation of the fetlock joint in standing horses as well as removal of osteochondral fragments. After pilot trials in cadaveric specimens confirmed the suitability of the technique, horses admitted for osteochondral fragmentation in the dorsal aspect of the fetlock joint were enrolled in the study. Briefly, with the horse sedated in standing stocks and after sterile preparation and local anesthesia of the region, dorsal osteochondral fragments were removed via a standard fetlock arthroscopic technique while using a needle arthroscope. The procedure allowed good visualization of the dorsal aspect of the joint in all cases. However, fluid delivery through the arthroscopic cannula is limited and additional fluid delivery through a needle inserted into the joint was beneficial to improve visualization after fragment removal. Localization and successful removal of all osteochondral fragments was performed in approximately 20 minutes/joint without any major complications. Standing fetlock arthroscopy suppresses the risks associated with general anesthesia, reduces the time of hospitalization and cost, and can eliminate the use of systemic antibiotics. In addition, the use of this cheaper, smaller, and relatively flexible arthroscope may reduce the risk of cartilage and equipment damage during the procedure. We believe that this technique may make equine surgeons more inclined to perform standing fetlock arthroscopy with the associated benefit to horses that this will carry.

Effect of a Single Intra-Articular Injection of Bupivacaine on Synovial Fluid Prostaglandin E2 Concentrations in Normal Canine Stiffles

Jenna E. Giangarra¹, Sabrina L. Barry¹, Linda A. Dahlgren², Marian Benitez¹, Otto I. Lanz¹, Stephen R. Werre³

¹Department of Small Animal Clinical Sciences, Virginia-Maryland College of Veterinary Medicine, Blacksburg, Virginia; ²Department of Large Animal Clinical Sciences, Virginia-Maryland College of Veterinary Medicine, Blacksburg, Virginia; ³Virginia-Maryland College of Veterinary Medicine, Research and Graduate Studies, Blacksburg, Virginia