

- The most common treatment employed was NSAIDs (87.8%)
- The records of none of the EJD cases indicated submission to BVA/KC Scheme elbow scoring

## STATEMENT

The study highlights Labrador Retrievers as commonly affected. EJD was also found to predominantly be a bilateral disease. The high usage of analgesics re-affirms the welfare implications.

# Old tricks, new dogs and cats: use of intramedullary pins and cerclage wires in 87 comminuted fractures in a first-opinion charity hospital

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## OBJECTIVES

To describe the frequency of return to pain-free limb function and complication rate in canine and feline comminuted humeral, femoral and tibial fractures internally fixated with an IM pin and cerclage wires at a large first-opinion charity hospital.

## METHODS

Retrospective analysis of clinical and radiographic histories of 23 dogs and 64 cats that had comminuted fractures repaired with an IM pin and cerclage wire(s) in the last two years.

## RESULTS

In dogs, there were 10 femoral, 6 humeral and 7 tibial fractures, with most (>90%) being moderately or severely comminuted and occurring in ages <4 years. In cats, there were 28 femoral, 24 humeral and 15 tibial fractures, with most (>80%) being moderately or severely comminuted and occurring in ages <2 years. All animals apart from one cat (98%) returned to pain-free limb function within 20 weeks, with most (92%) achieving it by 14 weeks. Four dogs (17%) and six cats (9%) had mild complications of pin migration and two cats (3%) had post-operative infections. No complications led to fracture repair failure following suitable remedial action of pin trimming, removal, or antibiotics.

## STATEMENT

Use of IM pins and cerclage wires in internal fixation of comminuted long-bone fractures in dogs and cats is a straightforward, inexpensive and widely adaptable technique which in this first-opinion patient study showed a high degree of successful pain-free limb functional outcome. Complications were relatively common but easily rectified; IM pins and cerclage wires should continue to assume an important position in the orthopaedic surgeon's armoury.

# Exposure to osteoarthritic Synovial Fluid does not impact the viability of cultured adipose-derived Mesenchymal Stem Cells in dogs

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## OBJECTIVES

Cultured adipose derived Mesenchymal Stem Cells (adMSCs) are administered to osteoarthritic dogs via intra-articular injections, thereby introducing the cells to a potentially toxic environment. This study investigates the effects of Osteoarthritic Synovial Fluid (OA-SF) on the viability of adMSCs *in vitro*.

## METHODS

OA-SF (10 dogs) was filtered to remove cells/debris, then stored at -20°C. Canine adMSCs were plated onto 6-well plates in culture medium for 24 hours before the medium was changed to OA-SF, canine serum OR fresh culture medium. Total number and viability of cells from each of the three media were calculated following a further 24-hour incubation.

# Oral presentations

Cell suspensions from each plate were then cultured over five days.

## RESULTS

Following 24 hour exposure to OA-SF, the adMSCs demonstrated >85% viability with no significant differences in the total numbers of cells as compared with control medium or canine serum and no evidence that

OA-SF changed the ability of these stem cells to grow *in vitro*.

## STATEMENT

Cultured canine adMSCs when exposed to osteoarthritic synovial fluid for 24 hours not only remain fully viable but also continue to grow in culture, indicating that cultured adMSCs will retain both their viability and ability to grow when injected into arthritic joints.

# Feline total hip replacement: case series

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## OBJECTIVES

Total hip replacement (THR) for cats has only been reported in the veterinary literature in combination with dogs or as small preliminary series/single reports.

Our objective was to report the outcome of a larger case series of feline patients undergoing THR for a variety of coxofemoral pathologies; including those undergoing bilateral THR (only one cat previously reported) and those receiving nano implants (no published reports).

## METHODS

Medical records of 15 cats (19 hips) that underwent THR using BioMedix implants were reviewed.

## RESULTS

Reasons for THR included capital physal fractures (n=7), malunion of chronic femoral neck fractures (n=4), coxofemoral arthrosis secondary to hip dysplasia (n=5), poor function following femoral head and neck ostectomy (FHNO) (n=2), and femoral neck fracture following coxofemoral toggle procedure (n=1).

No intra-operative complications occurred; post-operative complications occurred in 4/19 procedures. Two patients developed medial patellar luxation and were successfully revised; two patients luxated the THR and were converted to FHNO.

Of the 17 quiescent THR, lameness resolved by 12 weeks post-operatively in 14/17. A mild lameness remained at 12 weeks in 2/17 and 1/17 was lost to follow-up.

Bilateral THR procedures were staged and lameness resolved in all. Two patients received nano implants (one luxated and one had a resolution of lameness without complication).

## STATEMENT

THR can be utilized for a range of coxofemoral pathologies in cats and provide good outcomes including following bilateral procedures. Nano THR implants can be inserted into cats. Luxations of the prosthesis or patella are previously reported complications following feline THR and warrant specific consideration.

# Preliminary validity testing of four clinical metrology instruments in osteoarthritic cats

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## OBJECTIVES

Diagnosing feline osteoarthritis (OA) is currently based on a combination of the cat's medical history, physical examination and radiography. Conflicting findings from physical examination and radiography renders difficulties. Using client-based Clinical Metrology Instruments (CMI) to assess the cat's behaviour and physical abilities are important tools in identifying chronic pain and