Physeal dysplasia with slipped capital femoral epiphysis: Review of two clinical cases
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Introduction - Feline physeal dysplasia syndrome is an infrequently seen condition in the clinic characterized by a late or non-fusion of growth cartilage beyond the expected age of closure. This implies a degeneration of the physis, losing its columnar chondrocytes structure that translates into mechanical weakness. This may be responsible of fractures along the growth plate, reported in the capital femoral physis and named Slipped Capital Femoral Epiphysis (SCFE)\(^1,2,3\). Most of the times it is a bilateral condition. If not, the contralateral hind limb most probably will be affected at a later date \(^2,3\). This pathology is most represented by overweight, castrated male cats\(^1,2,3\). This work’s aim is the description of two cases of SCFE referred to the University Veterinary Hospital of Barcelona, and the characterization of this illness.

Clinical cases – The two patients were male cats, with 20 and 24 months of age, with similar 4/5 body condition, and neutered at unknown age. Both cats presented bilateral hind limbs lameness, acute hip pain and no previous history of trauma. There was evidence of bilateral fractures of the femoral heads through the femoral physis, with epiphyseal-metaphyseal separation, in the radiographic and tomographic studies of their hips. Bilateral femoral and neck excision was performed on both patients, and they recovered successfully with good limb function in few weeks postoperatively. Histopathological findings confirmed the pathology of physeal dysplasia as the main cause of the spontaneous fractures of the femoral heads. It showed loss of columnar distribution of chondrocytes, as they were organized in clusters and surrounded of abundant extracellular matrix. Lesions were well delimited on the physeal area, with no evidence of epiphyseal or metaphyseal changes as osteolysis or sclerosis.

Discussion and conclusions – SCFE must be taken into consideration as a differential in neutered, overweight, adult cats, with non-traumatic hind limb lameness with radiographic images of non-fusion of the femoral head physis. Physeal dysplasia is a multicentric disorder where many physis may be involved, although the capital femoral physis fracture and slippage will be the one giving clinical signs because of the direction and magnitude of the biomechanical forces involved in the coxofemoral joint\(^2,3\). It is known that prepuberal gonadectomy delays the closure of the growth plate\(^4\), and it is thought to be one of the multifactorial factors that could take part in the etiopathology of this disease. A change in castration age could serve as a preventive measure for feline patients.

References and Reading suggestions