

FELINE KNEES & TEETH SYNDROME

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Feline Knees and Teeth Syndrome (K&T) is an association of non-traumatic patellar fractures and persistent deciduous cheek teeth. This syndrome has been recognized over the past decade. Findings include persistent deciduous teeth, co-eruption or impaction of permanent teeth, and pathologic fractures of the patella. The patellar fractures (often bilateral) are typically recognized in young cats¹. Some affected cats develop additional subsequent pathologic fractures elsewhere. The sentinel case was identified by the author in 2004². While the first case identified in the USA, affected cats have subsequently been identified in the Americas and the United Kingdom^{1,3}.

In the present case series of 15 cats, the expected age of onset of hind limb lameness, or age of radiographic diagnosis, was 24 months. Males were affected more frequently than females. Patellar fractures occurred in the absence of known trauma. In some cases, lameness and quadriceps swelling preceded radiographic fracture. Concurrent and subsequent spinal abnormalities and pathologic fractures of the pelvis and long bones have been reported up to 10 years following the onset of clinical signs.

A genetic etiology for K&T is suspected and further study is underway to investigate this theory. It has been suggested that K&T is a manifestation of a collagen disorder, specifically osteogenesis imperfecta (OI)⁴. In man, there are multiple phenotypes of OI that have been identified, some of which have been associated with dentinogenesis imperfecta^{4,5}. However, there are no syndromes of OI in man wherein deciduous teeth persist and spontaneous patellar fractures occur. Interestingly, in man, fractures of the patella and other bones have been associated with generalized osteopetrosis⁶. Patellar sclerosis has similarly been observed in some K&T cases. Additionally, several of the current cases have radiographic evidence of generalized osteosclerosis³. Cats with persistent deciduous cheek teeth should be closely monitored for this syndrome as pathologic (patellar) fractures can be anticipated.

Bibliography

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