



Feline Orthopaedics. Why cats are not small dogs?

Ignacio Calvo
Ldo Vet, PhD, CertSAS, Dipl ECVS, FHEA, MRCVS

Head of Service. Orthopaedics
Hospital Veterinario VETSIA, Madrid (Spain)

ignaciocalvobermejo@gmail.com

Apart from the size, no much similarities are present between small dogs and cats. The first difference is the difficulty present in diagnosing orthopaedics conditions that are not causing obvious lameness in the feline patient. Lameness is not necessary the most common sign of orthopaedic disease in feline patients. It has been shown that observation from the owner is more meaningful than the veterinarian examination when ascertaining the presence of feline orthopaedic problems. Behavioural changes such as reduced height of jump, unwillingness to go out, resentment when handling, lack of appetite or aggression could well be meaningful orthopaedic signs.

Furthermore, there are several meaningful anatomic differences such as the distal humerus and elbow joint. Cats have a supracondylar foramen medially that is crossed by the median nerve and brachial artery and an underdeveloped olecranon fossa (and not foramen like in the dog). Elbow ligaments are also different like having an olecranon ligament to compensate for the relatively small anconeal process and the presence of an olecranon fossa and not a foramen. These anatomical references are responsible for the different epidemiology in regard to distal humeral fractures (in dogs articular fractures are more common whereas in cats are supracondylar) and the need for both collateral ligaments to be broken in the cat to be able to have a luxated elbow (in dogs the elbow can be luxated only with a broken lateral collateral)

Another area of significant anatomical difference is the Sacro-iliac joint. Sacro-iliac luxation is a common injury that is always associated with other injuries (bilateral SI luxation, pelvic floor fractures, or other pelvic fractures). Sacral anatomy in the cat is totally different from dogs and therefore landmarks to apply a lag screw totally different.

Fracture management is also challenging, distal tibia fractures in cats are somehow similar to distal radius and ulna fractures in dog toy breeds. There seem to be poor vascularity in that area and also taking into account the poor soft tissue coverage of that area, make this fracture location a hazardous one. The use of external skeletal fixation in this location is generally not indicated.

It is also important to differentiate femoral supracondylar fractures from Salter Harris fractures in the feline patient, supracondylar fractures are relatively unstable and requires the use of plates and screws (hockey stick plate). Salter Harris fractures are fracture that once reduced are reasonably stable and can be treated with crossed pins (or rush pins)

Another big difference in cats is the presence of OA in more than 80% of cats over 12 years of age (average life span of cats in UK is 16 years of age). This condition is often overlooked by veterinarians. It is important to remember that these animals are more likely to show behavioural changes than obvious lameness and therefore it is easy to miss. However, if treated these cats will resume their normal behaviour. A big difference in regard to OA, is that secondary OA is only 30% of OA in cats, and therefore primary OA is more of a common feature in the cat than in the dog (extremely rare).

Cats also suffer from particular diseases such as mucopolysaccharidosis, Osteochondrodysplasia in the Scottish fold cat and different forms of erosive polyarthritis that I will show in the lectures