



Muscle injuries of the forelimb (Supraspinatus, Biceps infraspinatus, triceps...)

Ignacio Calvo

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

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

ignaciocalvobermejo@gmail.com

Panosteitis: This is a self-limiting condition that affects 2.6 patients every 1000. It is 4 times more common in the forelimbs compared to the hindlimbs. It is known to be affect several limbs causing alternating lameness. The Una is the most commonly affected bone (40%) and the German Shepperd dog the most prevalent breed. More frequent between 5-12 months of age but it has been described between 2 months and 5 years of age. Males are 4 times more likely to suffer panosteitis than female dogs and panosteitis is more common in summer and autumn. Diagnosis is suspected on clinical examination (pain on bone palpation) and confirmed with radiographs and the 'thumb print sign' which is an oval shaped area of increased bone density (sclerosis). Occasionally this can be diagnosed with CT, since it can be confused in clinical examination with elbow dysplasia. Recent research suggests that panosteitis is caused by an accumulation of proteins (certain serum amino acids were increased in dogs suffering form panosteitis).

Metaphyseal Osteopathy: This is also generally a self-limiting disease that affect 2,8 / 100.000 patients , age at presentation is generally between 2-6 months of age , 2,3 times more likely in male vs female dogs with the more common time of presentation in autumn and the least in winter. It has been reported in one cat. Diagnosis is based in clinical assessment, where we will see dogs with swelling around the joints and they will be painful when the metaphyseal areas are touched. They can present with fever. The aetiology is unknown. Radiographic signs are pathognomonic, the presence of a double growth plate line. This second line is caused by bone necrosis. Although it tends to be self-limiting dogs can be so painful that euthanasia might be considered in very severe cases. This condition can cause early closure of growth plates and therefore the owners should be warned against possible angular limb deformities in the future. Breeds commonly affected by this condition are Great Danes, Terranova and Weimaraner. This condition has been proven to be hereditary in the Weimaraner

Treatment remains a bit controversial. NSAIDs seem to be the initial treatment of choice, however on a study treating Weimaraner, only 50% achieved remission with NSAIDs, and a 100% did with the use of steroids, even the dogs that did not respond to NSAIDs, did to steroids when they were switched to that medication.

Treatment remains a bit controversial. NSAIDs seem to be the initial treatment of choice, however on a study treating Weimaraner, only 50% achieved remission with NSAIDs, and a 100% did with the use of steroids, even the dogs that did not respond to NSAIDs, did to steroids when they were switched to that medication.

Cranio-mandibular Osteopathy: This is a hereditary condition based on the heavy breed predisposition (west highland white terriers, cairn terriers and Scottish terriers). This condition creates new bone around the jaw and tympanic bulla. Signs can vary from mild to impossibility to open the mouth. Treatment is palliative and seems to stop around 12 months of age. In severe cases surgery such as rostral hemi-mandibulectomy might be necessary for these dogs to be able to lick food. These breeds can also suffer from middle ear disease that might require total ear canal ablation and lateral bulla osteotomy, this surgery in these breeds can be very challenging due to the aberrant amount of bone present in the bulla area that can make very difficult facial nerve identification and preservation.

Immune-mediate polyarthritis: IMPA is not an unusual presentation to the orthopaedic specialist. Clinical signs can vary from stiffness to an animal that is recumbent. Multiple painful and swollen joints should make us suspicious. In order to diagnose this condition we must sedate the animals and obtain several joint taps (at least 4) from small joints (Carpus, tarsus, elbow or stifle) at the same time we should take radiographs of the joints to ascertain if we are dealing with an erosive or non-erosive poly arthritis. IMPA joints are characterised by the presence of more than 40% neutrophils and high cellular counts. Lactate can be measured and should be less than 3.

Thoracic radiographs and abdominal ultrasound should also be performed as well as biochemistry, haematology and common infectious diseases of the area. We need to ascertain if this is an idiopathic IMPA or secondary to, infection/inflammation or neoplasia. If idiopathic immune-suppressive treatment should be started prednisone (1mg/kgm BID) for 2 weeks and depending on clinical al cytological response decide if we can start decreasing the medication or not.