Craniomandibular Osteopathy, (CMO); mutation associated with terrier breeds

In brief

Craniomandibular osteopathy (CMO, "lion's jaw") is a disorder of skull and jaw bones that mainly affects some terrier breeds, such as Cairn Terrier, Scottish Terrier, and West Highland White Terrier. Recent studies indicate that the mode of inheritance for this particular mutation may be different from previously reported and that the disease most closely follows an autosomal dominant pattern of inheritance with incomplete penetrance in the West Highland White Terrier. However, despite the dominant pattern of inheritance, even dogs with two copies of the mutation may not develop clinical signs due to the incomplete penetrance. Non-terrier breeds diagnosed with CMO may be expressing a different mutation.

Clinical overview

The first clinical signs of CMO typically appear at the age of 4 to 7 months. The skull bones and especially the mandible seem enlarged due to swelling and thickening of the jaw. The condition causes pain, which manifests in drooling, difficulties in eating, and unwillingness to open mouth. In addition, recurrent fever may be associated with CMO. Bone changes may disappear once the dog's growth period is finished, but before that multiple episodes of fever and pain may occur.

References

Online database
Online Mendelian Inheritance in Animals, OMIA (http://omia.angis.org.au/), Faculty of Veterinary Science, University of Sydney.

Scientific articles


Disease severity
Considerable

Clinical signs
- Swelling and thickening of the jaw
- Difficulties in chewing
- Pain
- Recurrent fever

Mode of Inheritance
Autosomal Dominant (Incomplete Penetrance)

Results of the genetic test are reported as follows:
- Clear
- At risk

Mutation(s) found in:
- Australian Shepherd
- Cairn Terrier
- Lancashire Heeler
- Mixed breed
- Scottish Terrier
- West Highland White Terrier