VETERINARY TECHNICAL DATASHEET

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

Mutation Found In :Cairn Terrier, Scottish Terrier, West Highland White Terrier

Disorder Type

- Skeletal

Disease Severity

- Moderate/severe

Background

Craniomandibular osteopathy 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.

Key Signs

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

Clinical Description

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.

Mode of Inheritance

- autosomal dominant

Gene Name

- SLC37A2

Next Steps

Treatment is pain management, supportive care, and symptomatic depending on the severity of the dog's clinical signs.

References

Hytönen M, Arumilli M, Lappalainen A, Owczarek-Lipska M, Jagannathan V, Hundi S, Salmela E, Venta P, Sarkiala E, Jokinen T, Gorgas D, Kere J, Nieminen P, Drögemüller C, Lohi H. Molecular Characterization of Three Canine Models of Human Rare Bone Diseases: Caffey, van den Ende-Gupta, and Raine Syndromes. PLOS Genetics. 2016 May 17;12(5):e1006037.