

Calvarial Hyperostosis

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Contributors:

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Disease description:

Calvarial hyperostotic syndrome clinically resembles craniomandibular osteopathy (CMO) and human infantile cortical hyperostosis (ICH). Clinical signs predominantly involve the skull ¹although there is one case report of changes in the femora that resembled those of craniomandibular osteopathy. ²There is progressive and often asymmetric skull bone involvement in the affected young bullmastiff dogs. Male dogs were originally reported to be affected,¹ but a recent case report described the signs in females as well.² The etiology remains unknown. A familial component is suspected.

DIAGNOSTICS

Characteristic radiographic findings consist of cortical thickening of the calvaria with irregular, bony proliferation over the frontal, temporal, and occipital bones.

Magnetic resonance imaging (MRI) findings included thickening of the frontal bones with loss of normal fat signal and changes in the overlying soft tissues. ²

Histopathological examination shows that the trabeculae of the calvarial diploë are thickened and contiguous with a sunburst-like pattern of subperiosteal trabeculae composed of woven and lamellar bone tissue, accompanied by loose fibrovascular tissue and a variable inflammatory response comprised predominantly of neutrophils.¹

In 80% of the cases presented, the lesion was self-limiting.

Etiology:

Idiopathic, unknown

Breed predilection:

Bull mastiff
Large size breeds

Age predilection:

Juvenile

Clinical findings:

ANOREXIA, HYPOREXIA
Bone deformity
Cachexia, weight loss
Dehydration
Ear pain
Eating difficult
EDEMA
Edema facial
Edema head
Exophthalmos
FEVER
Hypersalivation
Jaw pain
Lymphadenopathy
Malaise, depression, dullness
Oliguria
PAIN
Polydipsia
Skull, cranial bone enlargement
STRABISMUS, EYE DEVIATION
TACHYCARDIA
Tachypnea, Hyperpnea, Hyperventilation
Trismus