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Poster

Atlantoaxial instability secondary to dens agenesis in a dog

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Abstract

Atlantoaxial instability (AAI) is a condition characterized by excessive mobility due to trauma or congenital causes such as bone and ligamentous anomalies between the atlas (C1, 1st cervical spine) and axis (C2, 2nd cervical spine). It can cause varying degrees of neurological dysfunction due to cervical pain, spinal cord and root compression. While it can occur in dogs of all breeds and ages due to traumatic reasons, it can also occur due to congenital reasons such as anomalies of the dens and ligament structure. Congenital atlantoaxial instability is more common in small and toy breed dogs. The diagnosis of AAI can usually made by survey radiograph. Advanced imaging techniques allow the detection of cervical vertebral anomalies, the evaluation of existing spinal cord injury and syringomyelia. AAI can be treated conservatively or surgically. The case is 14 months old, 5 kg weight, a Miniature Schnauzer breed dog who was referred to the Surgery Clinic of Istanbul University – Cerrahpaşa Faculty of Veterinary Medicine with a history of unwillingness to play for 1-2 months, constantly licking his body and the air, making fly-catching movements, rubbing his paw on his face and neck pain.The patient had no history of trauma. At neurological examination, pain detected on palpation of the cranial cervical region and increased anterior and posterior leg tendon reflexes were detected. A diagnosis of atlantoaxial instability due to dens agenesis was made by evaluating the Magnetic Resonance Imaging (MRI), Computed Tomography and radiography. Since the clinical symptoms of the patient were not severe, conservative treatment was preferred. The patient was prescribed gabapentin at a dose of 10 mg/kg for neuropathic pain control. The dog has been under our follow-up for 4 months during this study and no abnormal findings were added during this period. The conclusion is that survey radiography alone is not sufficient in the diagnosis of atlantoaxial instability, CT has an important place in determining anomalies that may cause instability, and MRI has an important role in determining changes in the spinal cord structure.

Keywords: dens agenesis, cervical vertebral malformation, dog, atlantoaxial instability

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