



Congenital spinal kyphosis in 2 shepherd dogs

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Introduction

Congenital spinal deformities and subsequent kyphosis have frequently been reported in brachycephalic dogs. Clinical presentation depends on localization and severity of spinal cord compression. Common anomalies include wedge-vertebra, butterfly vertebra, and hemivertebra. (1)

The aim of this presentation is to describe clinical and radiographic findings in 2 shepherd dogs, and clinical outcome after surgical treatment in 1 dog.

Case description

Case 1 – An 8-week old German Shepherd dog was presented with a 2-week history of mild paraparesis and palpable lumbar kyphosis. Computed tomography (CT) revealed malformation of the lumbar spine which consisted of a wedge-vertebra of L3 and kyphosis of L1-L2 with an angle of 92°.

Case 2 – An 8-week old White Shepherd dog was presented for paraparesis. CT showed severe midthoracic kyphosis with an angle of 92° at T3-T8 vertebrae at 8 weeks of age, worsening to 65° at 5 months. Due to increased spinal cord compression, surgical treatment was performed at 7 months of age consisting of dorsal laminectomy, vertebrectomy T5-T6, distraction, followed by fixation. Postoperative angle measured 115°. Physiotherapy was initiated within one week after surgery and improvement in neurological and motor function was observed. Eight weeks after surgery, CT was repeated and the angle measured 100° with stable presentation of implants. Clinically, the dog had improved, but still showed mild paraparesis and ataxia.

(Fig.1)

Discussion

Treatment options for spinal deformity consist of conservative management or surgery. Several surgical options have been published, such as decompression alone or combined with realignment and stabilization. (2, 3)

Conclusion

Congenital spinal deformity should also be considered in non-chondrodystrophic dogs. Clinical signs may vary from mild to severe. In the event of progressive neurological worsening due to increased spinal deformity during growth, surgical intervention is warranted to bridge the time window until spinal development has completed.

References

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Fig.1 Sagittal CT-image of the cervical and thoracic vertebrae of case 2.