



Cervical extradural synovial cysts in a giant breed dog with osseous cervical spondylomyelopathy

Koen M. Santifort, DVM

Veterinair Verwijscentrum 'de Pietersberg',
Pietersbergseweg 14 6826 BV Oosterbeek
The Netherlands

koensantifort@gmail.com

Koen M. Santifort DVM, F. Viehoff DVM, Spec Comp An Surg (NL), T. Dobak DVM, Res. ECVDI, W. Bergmann DVM, Dipl. ECVP

Introduction

Extradural synovial cysts have been reported in canines in conjunction with several conditions of the spine. Most notably in young, giant breed dogs with osseous cervical spondylomyelopathy (CSM) (1,2). Definitive diagnosis is often not pursued, however. This case report describes the clinical, magnetic resonance imaging (MRI), intraoperative and histopathological findings in a dog with cervical synovial cysts in conjunction with osseous CSM.

Case description

A 1-year-old male canine Mastiff-crossbreed (70 kg) was presented with chronically progressive tetraparesis and ataxia. Severe proprioceptive and motor deficits were present in the pelvic limbs and to a lesser extent in the thoracic limbs (grade 3) (3). MRI showed severe, multifocal spinal cord compression due to bony facet joint proliferation. Also, multiple extradurally located T2W hyperintense round structures of 5-8 mm in diameter were visualized. One of these structures was situated laterally (left) at the C5-C6 interspace. Two others were present dorsolaterally at the C4-C5 interspace. Nervous tissue compression due to these structures was most severe at the C5-C6 interspace (40%) (figure 1). A C4-C7 continuous dorsal laminectomy was performed according to published techniques (1,3). Intraoperatively, three cystic structures were visualized (intact) at the interspaces (figure 2). Sharp dissection was applied to remove the cystic structures, releasing a small amount of viscous fluid.

Results

Histopathological evaluation revealed fibrovascular tissue with a synovial cell lining, consistent with synovial cysts (2). After initial (expected (3)) worsening of neurological status, the dog steadily improved over the weeks following surgery. At eight months after surgery, the dog was fully functional and owners were very satisfied with the outcome.

Discussion/Conclusion

This is the first reported case of extradural synovial cysts in a dog with CSM in which synovial cysts have been imaged preoperatively and intraoperatively, and that have been submitted for histopathology to confirm their nature.

References

1. da Costa RC. Cervical spondylomyelopathy (wobbler syndrome) in dogs. *Veterinary Clinics: Small Animal Practice* 2010;40-5:881-913.
2. Levitski RE, Chauvet AE, Lipsitz D. Cervical myelopathy associated with extradural synovial cysts in 4 dogs. *Journal of veterinary internal medicine* 1999;13-3:181-186.
3. De Risio L, Muñana K, Murray M, Olby N, Sharp NJ, Cuddon P. Dorsal laminectomy for caudal cervical spondylomyelopathy: postoperative recovery and long-term follow-up in 20 dogs. *Veterinary surgery* 2002;31-5:418-427.



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Figure 1:
T2-weighted sagittal image at the level of the C5-C6 interspace. Note the proliferative zygapophyseal joints (facet joints) bilaterally (red arrows) and the extradural hyperintense structure on the left (blue arrow), which markedly compresses the spinal cord (yellow arrow) in conjunction with the osseous proliferation. KM Santifort, F Viehoff, T Dobak, W Bergmann

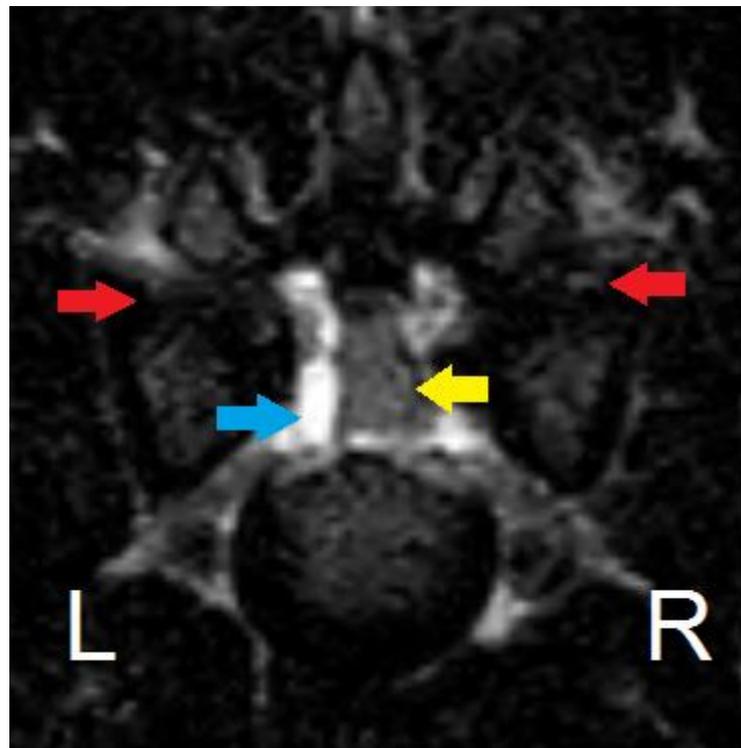


Figure 2:
Intraoperative aspect of the C5-6 synovial cyst (blue arrow) on the left of the spinal cord (arrowhead). In this image, cranial is to the right, caudal is to the left. KM Santifort, F Viehoff, T Dobak, W Bergmann

