November
Signalment and history

• 15 yo Saddlebred gelding
• 5 wk history of severely decreased range of motion in the caudal cervical region and swelling of the right neck
• Unwilling to bend or flex the neck and unable to lower head to graze, eat, or drink
• Muscle relaxants, topical anti inflamatories over right neck and gastroprotectants
• Recently, anorectic with considerable loss of weight and muscle tone
Physical examination

• Cervical range of motion was severely decreased
• Cutaneous sensation and reflexes- WNL
• Normal gait
  • very mildly hypermetric in the hind limbs, normal forelimbs
• Navigated up hill normally, extremely cautious to navigate down both the hill and curb, and extremely reluctant to lower his head
Nuclear scintigraphy assessment

• There is focally intense radiopharmaceutical uptake in the region of the C7 vertebral body.

• This degree of intensity is most consistent with fracture, infection, or neoplasia. A severe degenerative process cannot be ruled out, though is considered less likely.
Radiographic assessment

• The C7-T1 intervertebral disc space is narrowed, and the cranial aspect of T1 is mildly sclerotic. Two concave, smoothly margined defects are present within the cranial endplate of T1. This appearance is unusual, and discospondylitis is possible; however, this may be less likely given the normal appearance of the caudal endplate of C7. Intervertebral disc degeneration is also considered. That these findings represent a small fracture or a cyst-like lesion cannot be ruled out.

• There is mild to moderate osteophytosis of the articular process joints of the cervical spine, most pronounced from C4-C7.
Ultrasonographic assessment

• There is marked irregularity of the ventral borders of the endplates of the C7-T1 intervertebral disc space, particularly along the cranial endplate of T1 and within the region of the disc space itself. Heterogeneous material is present within the ventral disc space.
Differential diagnoses

• Chronic intervertebral disc disease?
• Discospondylitis
• Trauma
• Neoplasia (hemangiosarcoma)/ osteomyelitis with collapse of disc space
• Equine cervical intervertebral discs- no nucleus pulposus, but rather a central fibrocartilaginous area which becomes more fibrous peripherally
  • Decreases incidence of intervertebral disc disease in horses

• Age related degenerative changes exist, though typically without clinical signs
  • Discs degeneration with bulging of the dorsal longitudinal ligament may compress nerve roots

• All reported cases of IVDD within cervical spine
  • One thoracic lesion in a donkey
• Discospondylitis - inflammatory disease of the intervertebral discs and vertebral bodies

• Seeding of hematogenous bacteria, localized infections, or secondary to trauma
  • Tortuous vessels near endplates

• Most common in dogs
  • Reports in cats, pigs, horses, alpacas

• In horses, most commonly reported in the cervical spine
  • Mid thoracic, lumbar and sacral spine also reported
Outcome

• This patient was euthanized due to poor prognosis.

• Necropsy revealed complete replacement of the C7-T1 intervertebral disc by a marked amount of fibrous connective tissue that contains numerous haphazardly arranged blood vessels that are occasionally lined by plump endothelial cells as well as low numbers of macrophages, lymphocytes, plasma cells, and hemosiderin-laden macrophages. Focally, the vertebral body of C7 contains a moderate amount of proliferative new bone and adjacent fibrous connective tissue.

• Conclusion Intervertebral disc, C7-T1: diffuse, severe, degeneration of disc material with replacement by fibrous tissue
References

• Dyson. Lesions of the equine neck resulting in lameness or poor performance *Vet Clin Equine* 2011; 27:417-437

• Alward, Pease, Jones. Case Report: Thoracic discospondylitis with associated epaxial muscle atrophy in a Quarter Horse gelding *EVE* 2007; 19(2): 67-71


• Sweers, Carstens. Imaging features of discospondylitis in two horses *VRUS* 2006; 47(2): 159-164