



Diskospondylitis

Who can be affected?

Male dogs, larger dogs, older dogs and the Great Dane, Labrador and Boxer are at higher risk for developing diskospondylitis.

Cause

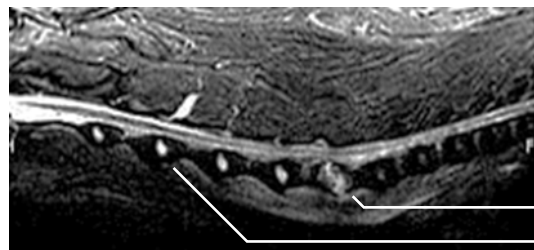
Diskospondylitis is caused by an infection of the intervertebral disc, adjacent vertebral endplates or surrounding soft tissue. Without treatment, the infection can progress causing meningitis and spinal canal disease.

Symptoms

A major sign of this disease is pain, secondary to the inflammation from the infection. The infection is typically in an organ system like the urinary bladder, prostate, or heart valve and carried in the blood to the vertebral endplates. Because there is often systemic infection these dogs are often sick with a fever, no appetite, and weight loss. The disease can progress and cause pressure on the spinal cord from an abscess around the spinal cord (empyema), a slipping (luxation) or even a fracture of the vertebrae. The signs of spinal cord disease can include weakness (paresis) or paralysis, poor coordination (ataxia), and poor sense of limb position (proprioception).

Diagnostics

The diagnosis can be made from an X-ray (radiograph) of the vertebral column but this requires significant bone destruction. Studies have shown that clinical signs must persist for 2 to 6 weeks in order for radiographs to be diagnostically helpful. Magnetic resonance imaging (MRI) is more sensitive and superior for detection of the disease because it can detect subtle changes in the soft tissue or bone and does not require significant bone destruction to be diagnostically helpful.



— Infected disc
— Normal disc

Shown here is a MRI from a patient with diskospondylitis, a radiograph of this area was also performed and came back normal. The bottom line shows the normal disc (well defined bright spot) and the normal soft tissue under the disc (dark). The top line shows an infected disc, vertebral endplate and soft tissue. The disc space is less bright and expanded because infection has replaced the disc and is eating into the vertebral endplates. In addition, the soft tissue is bright indicating inflammation or infection and the spinal cord just above the disc space appears mildly compressed.

Treatment

Once diskospondylitis is diagnosed an effort should be made to identify the source of the bacterial or fungal infection by doing blood or/and urine testing. If there is compression of the spinal cord or progression of disease despite anti-microbial treatment then surgery is suggested in order to decompress the spinal cord and collect samples for culture. A positive culture would then predict which antibiotic or antifungal would have the highest chance of a treatment success.

Initially more than one antibiotic will be used in conjunction with aggressive pain management. Antibiotic therapy should last for at least 6 weeks or 2 weeks beyond resolution of clinical signs, whichever is longer. Some neurologists will choose radiographic resolution of the disease as an end point for treatment, which often necessitates being on antibiotic for 1 year.

At BVNS we are also researching the use of C Reactive Protein (CRP) as a biomarker for this disease. It is hoped that CRP will aid in the diagnosis of this disease and in determining when antibiotics can be safely stopped in these patients.

Progression

The prognosis is generally good for this disease.



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