

What is the diagnosis?

History

A 5-year-old male Dachshund was presented with back pain for three weeks. The dog was ataxic and showed pain during manipulation of the thoracolumbar region. No obvious lesions were present on the radiographs made by the referring veterinarian.

Clinical/neurologic examination

The dog was ataxic and paretic with delayed proprioception in the hind limbs and showed pain in the thoracolumbar area. A lesion was suspected in the spinal cord between the second thoracic (T2) and third lumbar (L3) vertebra. The first differential diagnosis was disc herniation.

Computed tomography of the thoracolumbar area was recommended.

Computed tomography (CT)

The dog was positioned in dorsal recumbency and two scout views were made (ventro-dorsal and latero-lateral) to check the correct positioning. A CT examination of the suspected area was performed. (Figures 1, 2, 3 and 4.)

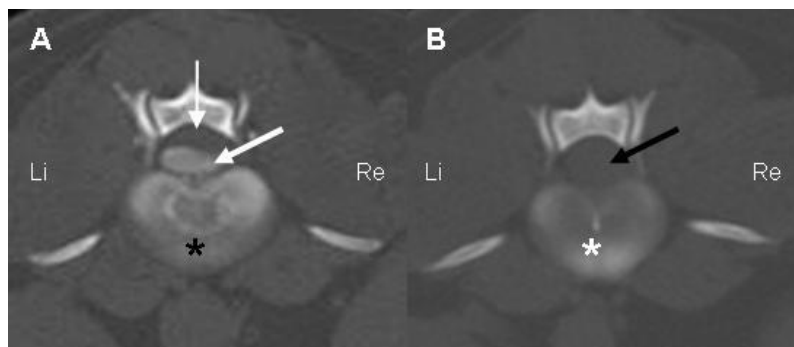


Figure 1: Transverse CT image of the intervertebral disc space of L2-L3 (A) and L3-L4 (B).

- A. Abnormal disc (black asterisk). Calcified disc material (thick white arrow) is present on the left side in the spinal canal. An extradural compression is located ventrally and on the left side of the spinal cord with a dorsal displacement of the spinal cord (thinner white arrow).
- B. Normal disc (white asterisk). The normal position of the spinal cord within the spinal canal can be seen (black arrow).

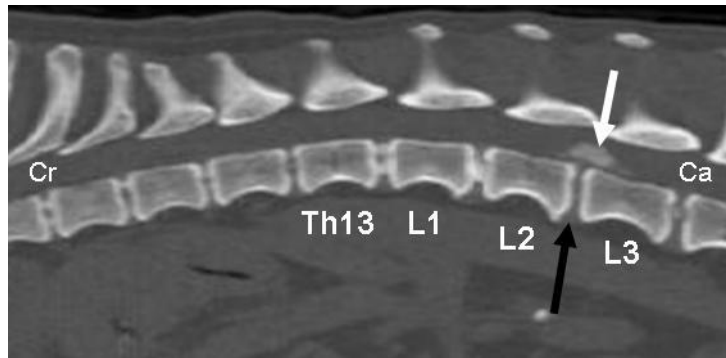


Figure 2: CT study of the thoracolumbar area reconstructed in the sagittal plane showing a narrowing of the intervertebral disc space of L2 and L3 (black arrow). Calcified disk material (white arrow) is present within the vertebral canal.



Figure 3: CT study of the thoracolumbar area reconstructed in the dorsal plane. Exact orientation is possible from the presence of the last ribs of T13 (black asterisk). Calcified disc material (white arrow) is visible within the spinal canal, localised more on the left side.

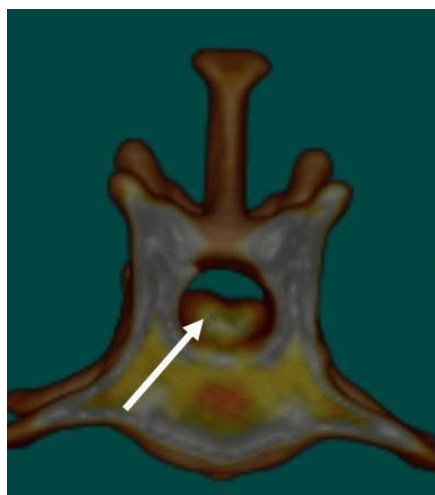


Figure 4: 3D-CT of the L2-L3 area. The incidence of calcified disc material within the spinal canal is obvious (white arrow).

Diagnosis

Disc herniation at the level of L2-L3 with calcified disc material localised on the left side in the spinal canal.

Conclusion:

CT is an accurate medical-imaging technique in dogs with suspected disc herniation. Thin, transverse slices of the spinal structures can be obtained that avoid superimposition of the overlying structures. CT reconstructed images in different planes allow evaluation of the status of the intervertebral discs: if present, bulging and/or pressure on the spinal cord and nerve roots can be seen. The excellent contrast resolution of CT demonstrates the incidence of mineralised disk material and/or haemorrhage within the vertebral canal.