What's your Radiographic Diagnosis?

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History

A five-year-old Weimaraner was presented with a seven-month history of ataxia progressing slowly from a left hind leg lameness to paraparesis.

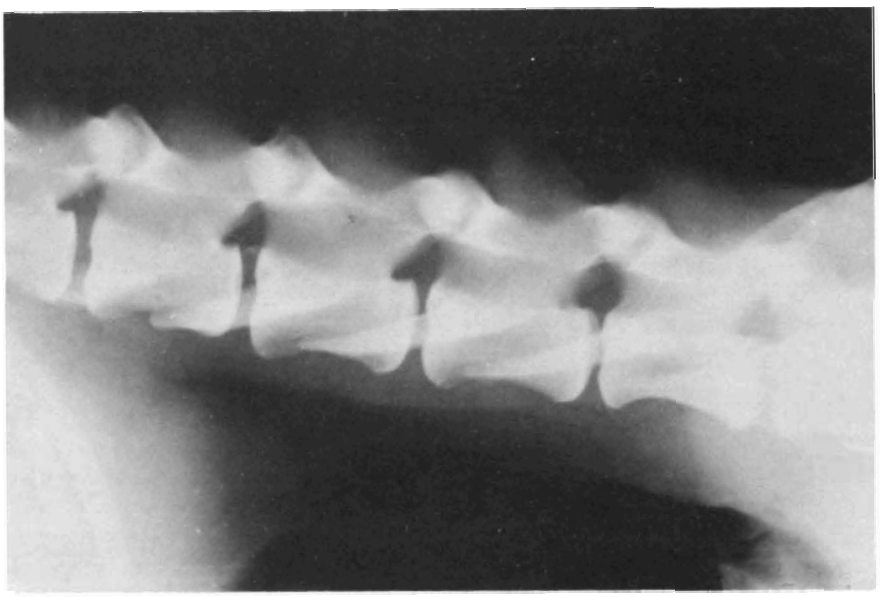

Figure 1. Lateral view of lumbar region of spine.

Examination

On exam, atrophy of the semimembranosus and semitendinosus muscles, general thinness, and dehydration were noted. Clinical data included a mild hyperglycemia (118 mg/dl) and hypoalbuminemia (2.7 gm/dl). Other parameters were within normal limits. Neurological examination revealed bilateral ataxia, weakness, and knuckling, with proprioceptive and visual placing deficits, of the hindlimbs. Patellar reflexes were present but central recognition of pain was poor and there was a diminished withdrawal response from the toe-pinch stimulus. No forelimb abnormalities were noted. These findings were summarized as bilateral lower motor neuron signs with respect to the ischiatic nerves.

Radiographs

Survey radiographs (Fig. 1, only lateral shown): There is widening of the neural canal of vertebra L-4, due primarily to thinning of the dorsal portion of the neural arch. The small focus of calcification seen at the dorsal

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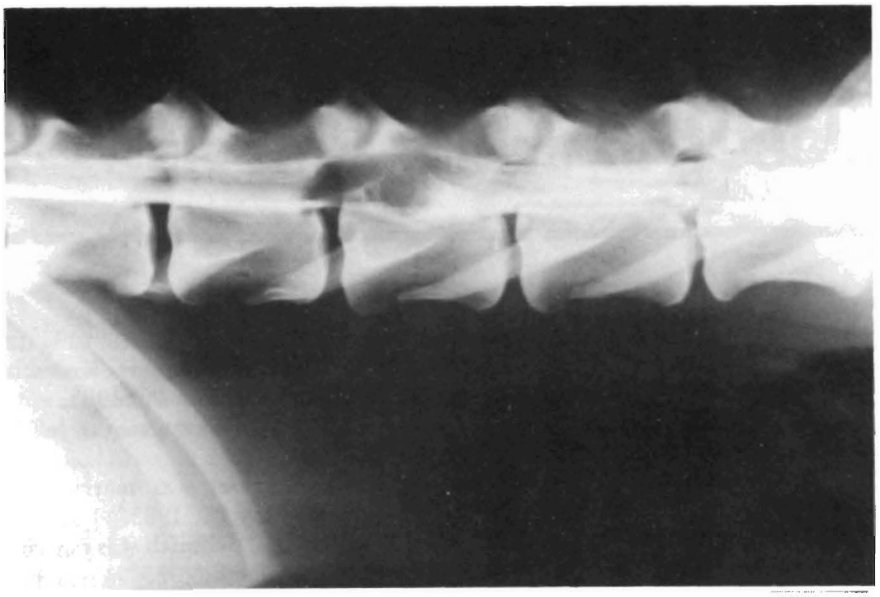

Figure 2. Myelogram, lateral view of lumbar region of spine.

aspect of the L-3/4 disc space appears on the VD projection as being due to lateral spondylosis extending from the caudal right margin of the L-3 vertebral body. Based on these findings, a myelogram was performed.

Myelogram (Fig. 2, only lateral shown): A large (1.4 x 1.8 x 0.9 cm) mass was present at L-4 along the ventral portion of the neural canal, displacing the spinal cord dorsally. The widening of the subarachnoid space adjacent to the mass creates the "golf tee" sign characteristic for intradural/extramedullary mass lesions.

Diagnosis

A tentative diagnosis of neurofibroma/meningioma was made, this being the most common cause of intradural/extramedullary masses. Owners elected euthanasia and authorized post-mortem examination.

Necropsy revealed a cream-colored, multilobular tumor located subdurally on the ventral side of the spinal cord at vertebra L-4. It was described histopathologically as dense collagenous stroma and neoplastic cells apparently arising from pia mater, and was diagnosed as an intradural spinal meningioma with compression of the spinal cord. Spinal cord lesions were limited to areas within 1 cm of the tumor.