WHAT IS YOUR DIAGNOSIS

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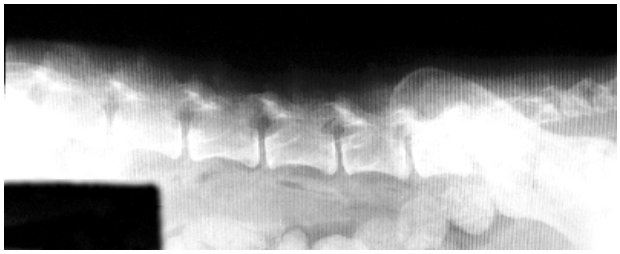

Figure 1A

Figure 1B

Figure 1 A. Left-right lateral radiograph of the lumbar spines
B. Enlarged Figure 1A, with the focus on the caudal lumbar spines

Figure 2A

Figure 2 B

Figure 2 A. A ventrodorsal radiograph of the pelvis and both femurs
B. Enlarged Figure 2A, with the focus on the left ilium and the left proximal femur

History :

A 5-year-old male dog was presented a progressively deteriorating lameness and paralysis of both hindlimbs during the past week. There was no history of any recent accidental injury. The results of the neurological and orthopedic examinations did not show any abnormal signs. Blood tests revealed a moderate anemia and a mild elevation of the calcium and inorganic phosphorus blood levels.

Both a left-right lateral radiograph of the thoracolumbar (Figs. 1A, 1B) and a ventrodorsal radiograph of the pelvic girdle together with both femurs (Figs. 2A, 2B), were performed.

Give your diagnosis and turn to the next page.

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Radiographic Diagnosis

Osteomyelitis; polyostotic (multiple) bone lesions

Radiographic Findings and Comments

There was an expansile bone change visible within the lumbar spine, the pelvic bones and both of the femurs. An active periosteal reaction was revealed by the destroyed lumbar spine (Figs. 1A, 1B). Decreased bone opacity and radiolucency, within both femurs (Figs. 2A, 2B) were clearly detected, which indicated the bone destruction. Additionally, the cancellous compartment of the pelvic bones appeared to consist of foci of lucent bone, osteomyelitis was considered to be the most likely diagnosis.

Osteomyelitis, or infection of the bone, can be caused by fungal, bacterial or protozoal organisms. Viral organisms also have been reported but rarely. Pathogens may gain access to bone by hematogenous spread, extension from an adjacent soft-tissue infection or direct inoculation. In this case the polyostotic bone lesions are probably caused by hematogenous spread. Fungal, blastomyces or coccidioides, osteomyelitis is more likely than bacterial osteomyelitis as a cause of permeative lysis. Diffuse permeative lysis is usually due to osteomyelitis but can be bone neoplasia. According to this, a chest radiograph for checking lung metastasis could give more information (although fungal granulomas will look like metastatic lesions). Bone scintigraphy, sampling for histopathology and blood culture, to identify the pathogen, should be performed to support the final diagnosis.