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Medical Imagery

A man with disabling low back pain: Echinococcus of the sacrum

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SUMMARY

Bone involvement in hydatid disease is rare, and when it does occur, the most common sites of involvement are the spine and pelvis. A case of bone hydatid disease involving the sacrum is reported here.

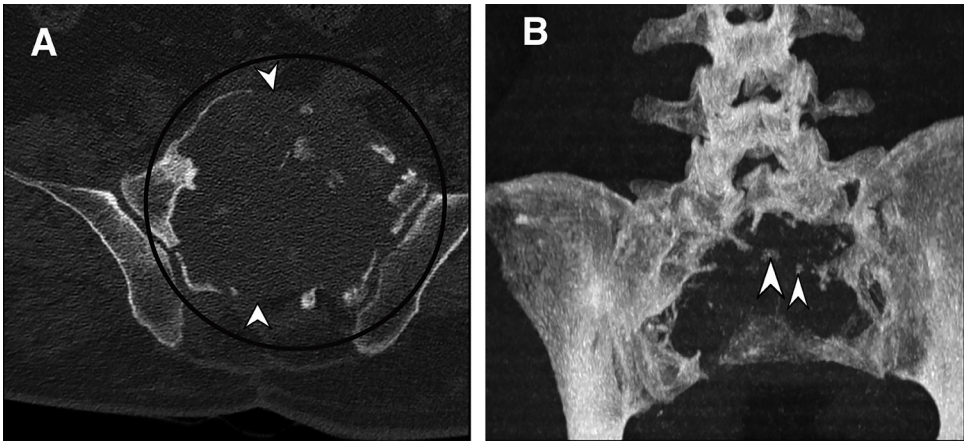

Figure 1. A Axial CT scan of the sacrum in the bone window showing a lytic expansile lesion (delineated by the black circle) with cortical disruptions (arrowheads). (B) Coronal maximum intensity projection (MIP) in the bone window showing the large lytic lesion with some internal bony trabeculae (arrowhead).

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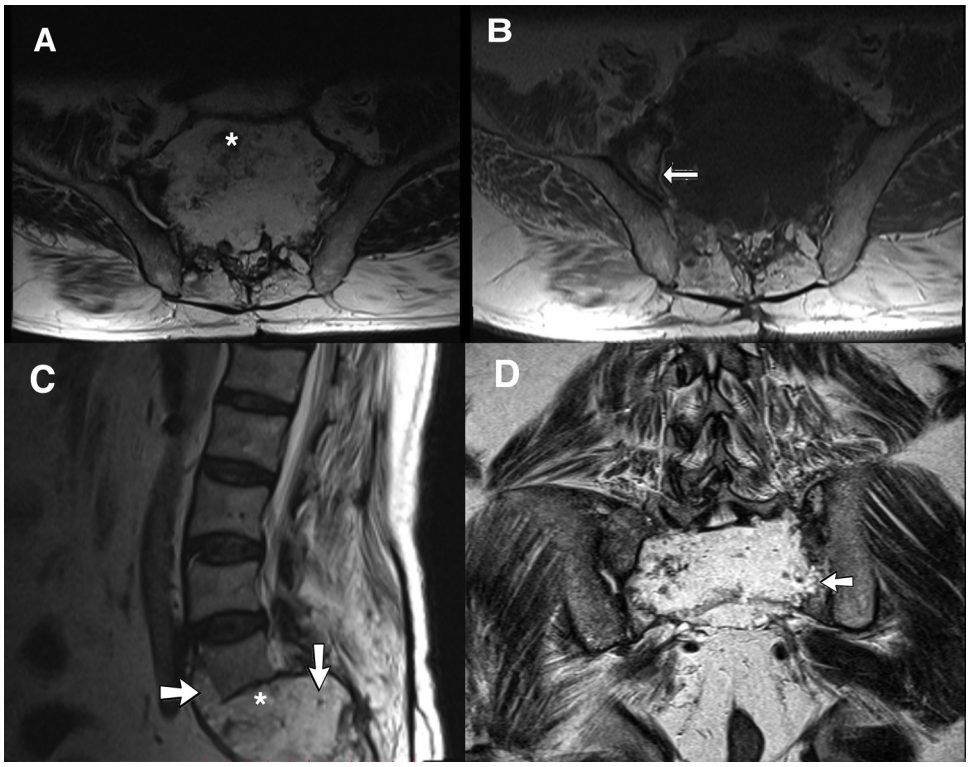

Figure 2. A Axial T2-weighted image of the sacrum showing an expansile heterogeneous high signal lesion within the sacral bone. The signal-void areas in the lesion (asterisk) correspond to the bony trabeculae seen in the CT scan. Soft tissue involvement is not seen. (B) Axial T1-weighted post contrast image of the sacrum showing the same lesion with low signal intensity. Mild peripheral enhancement is seen (arrow). (C) Sagittal T2-weighted image showing paravertebral (arrow) and disk (asterisk) involvement. (D) Coronal T2-weighted image showing left sacroiliac joint involvement (arrow).

1. Introduction

Echinococcosis (also commonly referred to as hydatid disease or hydatidosis) is a parasitic infection that is still common in many parts of the world. Regions endemic for the infection include some areas of Africa, Europe, Asia, the Middle East, and Central and South America.[1,2]

Bone involvement is a rare occurrence (0.5–4%), and typically presents as multiloculated cysts in the vertebral body, with disk space sparing. Spinal involvement is seen in 30–50% and pelvic involvement in 20% of these cases.[3,4]

2. Case report

A 61-year-old male presented to the emergency department with persistent and severe low back pain. The patient also had a history of low back pain in the past 6 months. He reported a previous diagnosis of multiple renal stones and was scheduled for a percutaneous nephrostomy within the next 2 weeks.

On initial evaluation the patient was afebrile with stable vital signs. No costovertebral angle tenderness was present. There were no radicular symptoms or focal neurological findings. Midline tenderness was detected in the lower lumbar and sacral area.

An abdomino-pelvic computed tomography (CT) scan showed multiple renal stones in both kidneys (not shown). There was also an expansile lytic lesion with areas of cortical disruption in the sacral bone. A few bony trabeculae were seen within the lesion (Figure 1). The location of the lesion correlated with the point of maximum tenderness on physical examination. Magnetic resonance imaging (MRI) was ordered to evaluate the extension of the lesion and soft tissue involvement. The MRI results revealed an expansile lesion with high signal intensity in T2-weighted images and low signal intensity in T1-weighted images (Figure 2).

The patient underwent surgical resection, with a presumptive diagnosis of a possible malignancy. However, the pathological examination revealed that the lesion was a hydatid cyst.

3. Discussion

This case represents an example of a patient who had not received a complete diagnostic workup. The patient's initial symptoms were attributed to nephrolithiasis after the detection of renal stones in the abdominal radiographs. Bone involvement in hydatid disease is a rare occurrence,[5] and when it does occur, its most common locations are the spine and pelvis.[6] Vertebral disease usually manifests as a multicystic lesion that grows in a branching pattern along the lines of least resistance in bone.[7] Soft tissue involvement is usually more prominent.[5] The radiographic findings in this case were unexpected, as there was a uniloculated lytic lesion, with minimal soft tissue extension.

In areas where hydatid disease is endemic, bony involvement from echinococcosis can be considered in the differential diagnosis of osteolytic lesions.

Acknowledgement

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Conflict of interest: No conflict of interest to declare.

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