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## Case Report

# A giant spinal schwannoma mimicking a renal mass: A case report

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## ABSTRACT

Spinal schwannomas arise from the cells covering the nerves within the spinal canal. In most cases, they remain confined within the intradural extramedullary space, but occasionally they extend into the extradural space resembling abdominal masses.

We present a case of very large spinal schwannoma mimicking a renal mass at ultrasound exam. Using contrast-enhanced computed tomography and magnetic resonance imaging we were able to detect and characterize the lesion and consequently assign a pre-operative diagnosis later confirmed by the histopathology report.

In this paper, we review computed tomography and magnetic resonance imaging features of spinal schwannomas and attempt a summary of possible differential diagnoses.

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## Case report

A 50-year-old man presented to the emergency room with recent onset of abdominal pain radiating to his right back. He denied any other gastrointestinal, urinary, and constitutional symptoms. He denied any illnesses in the past. As nephrolithiasis was suspected, the patient was sent to our Radiology Department to perform a chest x-ray and abdominal ultrasound.

Chest x-ray showed a soft-tissue opacity that appeared to bulge through the posterior right hemithorax, determining an upward diaphragmatic displacement (Fig. 1).

Abdominal ultrasound showed a mass with heterogeneous echotexture (solid and cystic components), adjacent to the upper pole of the right kidney (Fig. 2).

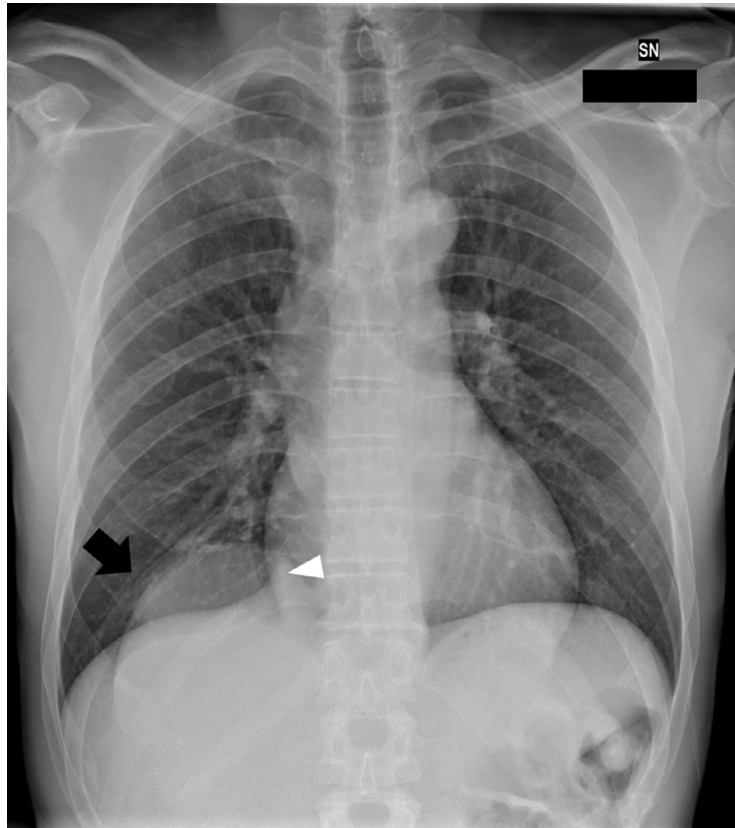
As a renal mass was suspected, contrast-enhanced computed tomography was performed to characterize the lesion.

Contrast-enhanced computed tomography detected a right retroperitoneal paravertebral mass, with  $9 \times 12 \times 12$  cm, characterized by heterogeneous contrast enhancement and four linear calcifications. There was no apparent tissue plane between the lesion and the lateral margin of the right psoas major muscle, but it could be easily detached from the right

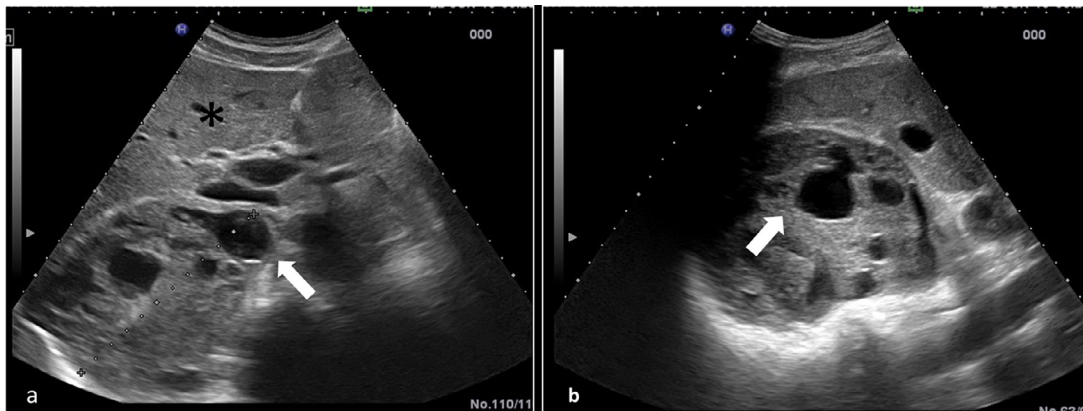
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**Fig. 1.** – Chest x-ray. A soft-tissue opacity (black arrow) appears to bulge through the posterior right hemithorax determining upward diaphragmatic displacement. Silhouette sign (black arrowhead).



**Fig. 2.** – Ultrasound, convex transducer. Axial scan (a) and longitudinal scan (b) showed a well-circumscribed heterogeneous mass with solid and cystic components (with arrow), in contact with the right lobe of the liver (\*) and apparently originating from the right kidney. No Color Doppler sign was demonstrated.

kidney, contrasting with the ultrasound findings. Furthermore, a peduncle attaching the lesion to the spinal canal at D12-L1 level was noted. A smaller lesion (3 × 3 × 4 cm) with the same radiological features was found lying anteriorly to the first lesion (Fig. 3).

Magnetic resonance imaging (MRI) showed a capsulated mass with multiple cystic, hemorrhagic areas, and thick septa with intense contrast enhancement (Fig. 4). MRI revealed that

the lesion arose from the intradural extramedullary space, displacing the spine cord contralaterally with no signs of infiltration (Fig. 5). There was a smaller lesion that showed similar signal characteristics.

Therefore, the patient underwent surgery, and both tumors were completely removed with safe margins and no neurologic complications up to the present date. Histopathology report confirmed that they were two spinal schwannomas.

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