

Benign Retroperitoneal Schwannoma Mimicking Adrenal Mass

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Benign retroperitoneal schwannoma is a rare tumor originating from the schwann cells in the myelinated neural sheath and mostly manifested as an adrenal mass.⁽¹⁻⁷⁾ However, there are reports of developing of this tumor within or in front of psoas muscle⁽⁸⁾ or other parts of the body. We report a benign retroperitoneal schwannoma, incidentally detected through imaging, mimicking an adrenal mass.

Case Report

A 57-year-old female, weighed 85 kg at presentation, was referred to our center with a large abdominal mass, which was incidentally detected in right adrenal site through imaging. No history of right flank pain, gross hematuria, sweating, flushing, or tachycardia was reported. On physical examination, the mass was not palpable in the right flank.

Moreover, microscopic hematuria was not seen in the conducted tests, and laboratory studies for pheochromocytoma were negative. CT scan showed a large right adrenal mass with low density central area, indicating central necrosis together with enhanced septation (fig. 1). MRI demonstrated a hyperintense lesion in T₁ weighted image, which is seen in figure 2A, attached to the kidney, and in figure 2B, apart from the kidney with adrenal origin. Right adrenal gland is seen in figure 2A. The hyperintense lesion was seen in T₂ weighted image, as well (fig. 2C).

The patient underwent exploration with the preoperative differential diagnoses of adrenal mass, retroperitoneal mass, and renal mass, respectively. A large mass apart from kidney was

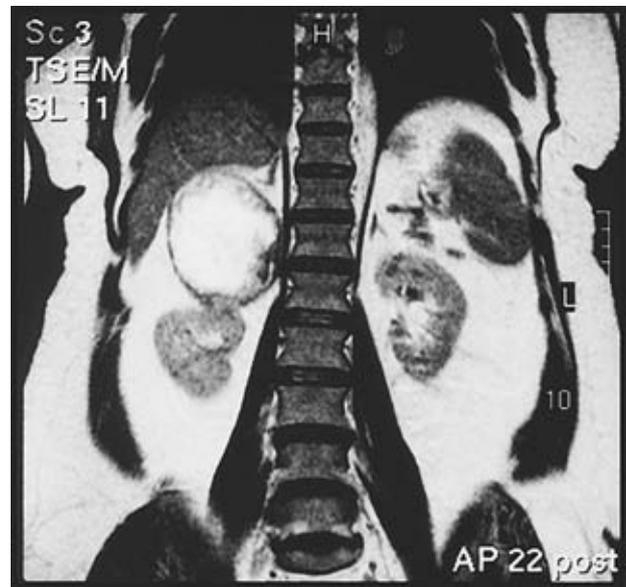


FIG. 1. Abdominal CT scan showed a large mass with central necrosis at the right adrenal area.

seen that had pushed the adrenal gland upward and could have been easily separated from the kidney and adrenal gland. The tumor was drained via a vein at a size of renal vein which was directly connected to inferior vena cava. The mass, measured 6 × 8 × 12 cm, was removed (fig. 3A). In figure 3B, necrotic and cystic changes in central areas are seen through a cut section from the mass. Histologic examination confirmed that this giant tumor was a benign retroperitoneal schwannoma, predominantly Anton A type (fig 4). In 1-year follow-up, no recurrence was observed and the patient had no complication.

Discussion

Retroperitoneal schwannoma is a rare tumor originating from the schwann cells in the myelinated sheath of nerves.⁽¹⁾ It has been mostly reported a benign tumor.⁽¹⁻⁷⁾

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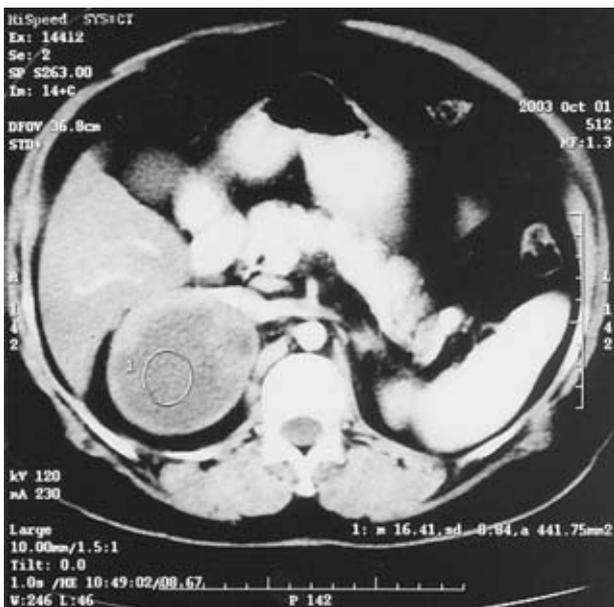
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In a study carried out in Japan, of all the cases of schwannoma 94 (72.3%) were benign and 36 (27.7%) were malignant.⁽²⁾

Schwannoma develops as an adrenal mass, as reported in most cases.⁽¹⁻⁷⁾ Symptomatic patients have only vague flank pain. Due to central necrosis, this tumor has a low density⁽²⁾ or internal cystic schema⁽³⁾ in CT scan. However, although the presence of cystic schema is highly indicative of schwannoma, this is not necessary for diagnosis.⁽³⁾ Exploration is often required for diagnosis of this tumor, since mere imaging would not be sufficient in most cases.⁽⁵⁾

In our case, an internal cystic schema was seen. Although the mass was separate from adrenal gland and kidney in most CT scan cuts, in some



A



B



C

FIG. 2. MRI, A. T₁ weighted image: a hyperintense tumor in the upper pole of the right kidney, B. T₁ weighted image: the tumor appears to be separate from the kidney. C. T₂ weighted image: the tumor is hyperintense.

other cuts the mass seemed to have completely adrenal origin. Also, it seemed that there was a complete adhesion to kidney, even originating from the kidney capsule. As a result, we could not determine its real origin preoperatively. During



A



B

FIG. 3. A. the extracted tumor, B. the tumor, longitudinally incised.

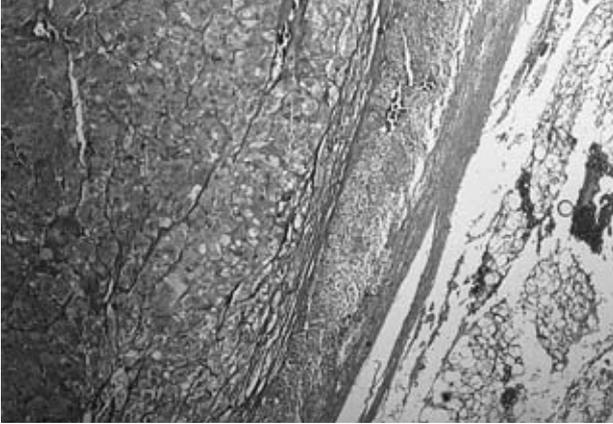


FIG. 4. Pathologic view of the tumor texture, a benign retroperitoneal schwannoma, predominantly Anton A type

exploration, the mass was completely separated from kidney and adrenal gland, and our diagnosis was retroperitoneal mass. Finally, pathologic diagnosis of benign schwannoma confirmed its retroperitoneal nature.

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