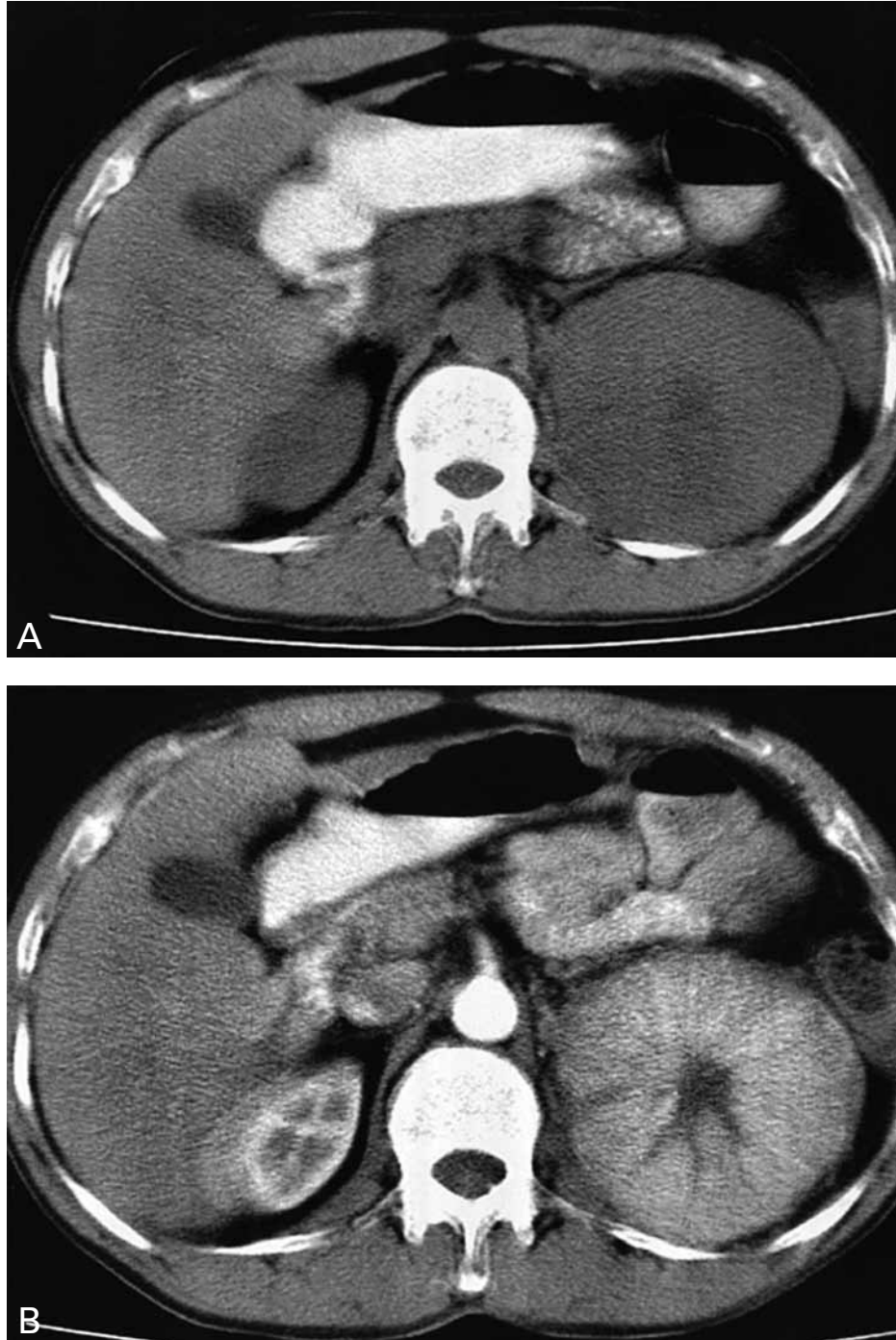


TYPICAL RENAL ONCOCYTOMA

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Key-word: Oncocytoma

Background: A 45-year-old man presented with a 1-year history of gradually progressive left flank pain. Physical examination was normal except for left flank tenderness. Laboratory findings were unremarkable.



Work-up

CT scan of the abdomen at the level of the kidneys (Fig. 1) demonstrates on unenhanced transverse section (A) a hypodense solid mass in left kidney. Contrast-enhanced CT scan, during the arterial phase (B) shows a marked enhancement of a renal mass with a central stellate scar, a typical 'spoke wheel' pattern. No lymphadenopathy nor perirenal involvement is seen.

Radiological diagnosis

Based on the imaging features, the diagnosis of *renal oncocytoma* was suggested. The patient underwent left radical nephrectomy. Histopathologic examination of the specimen revealed renal oncocytoma.

After 2 years of follow-up, the patient was free of symptoms and no recurrence was found.

Discussion

Renal oncocytoma is an unusual pathologic entity which represents about 5% of renal tumors. Renal oncocytomas may be multicentric, bilateral, or associated with renal cell carcinoma.

Although flank pain and hematuria are occasionally seen, the majority of renal oncocytomas are asymptomatic and are detected incidentally.

No characteristic imaging findings in renal oncocytomas are noted on plain film or intravenous urography.

On contrast-enhanced CT scan, renal oncocytomas typically present as well-defined, smooth, relatively homogeneous masses, which reveal less pronounced enhancement than normal renal parenchyma. Large renal oncocytomas often reveal a well-delineated central, stellate area of low attenuation (so-called central scar). Well-defined sharp borders, central stellate scar and spoke wheel appearances are typical for oncocytomas.

Although the imaging findings may suggest the diagnosis of renal oncocytomas, these findings are non-specific since similar findings have been observed in some cases of renal cell carcinoma. Therefore, preoperative differentiation from renal cell carcinoma may be difficult.

It is recommended to remove surgically the affected kidney because of the malignant potential of renal oncocytoma and since it is impossible to confidently exclude renal cell carcinoma preoperatively.

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