

## Incidentally detected renal oncocytoma

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### Introduction

Renal oncocytoma is a benign renal epithelial neoplasm. In this case report, we present a case of incidentally detected renal oncocytoma which was treated with nephrectomy.

### Case presentation

A 53-year-old unmarried fisherman presented with the complaint of left side loin pain for two months. He complained of intermittent dull aching type pain of moderate severity, lasting half an hour. He had no associated hematuria or dysuria and did not give a history of fever. His bowel habits were normal and there were no dyspeptic symptoms. He had hypertension and diabetes mellitus and was on treatment. Cardiovascular and respiratory system examinations were unremarkable. Abdominal examination revealed no palpable masses.

Routine serum investigations were all within the normal range. Serum creatinine was 96 $\mu$ mol/L. An ultrasound scan of the abdomen revealed a rounded heterogeneous mass in the superior pole of the right kidney. Further characterization with contrast-enhanced computer tomography revealed a heterogeneously contrast-enhancing lesion measuring 7.2 $\times$ 6.8 $\times$ 5.7cm in size with no extension beyond Gerota's fascia. Renal hilum was not involved and there was no vascular invasion. No synchronous lesions were noted in the ipsilateral or contralateral kidney. There was no evidence of distant metastasis.

A nephrectomy, removal of the right kidney, perirenal fat and right adrenal gland was performed with an upper midline laparotomy incision (Fig 1). Post-operative recovery was uneventful, and the patient was discharged on postoperative day four. On follow up visit he complained of minor discomfort on the operated side, and his serum creatinine was elevated to 130  $\mu$ mol/L. The histology confirmed the

diagnosis of oncocytoma. Further, follow up with the oncologist and nephrologist was arranged.



**Figure 1.** Cross section of the tumour

### Discussion

Renal oncocytomas are classified as benign renal cell tumours accounting for 3-7% of primary epithelial renal neoplasms. [1] Frequently they are incidentally detected. It may be difficult to distinguish between oncocytomas and renal cell carcinomas through imaging [2]. Therefore, oncocytoma and renal cell carcinoma must be included in the differential diagnosis. The lesion being near the hilum of the kidney made it difficult to perform a partial nephrectomy in this case [3]. Preserving the healthy renal parenchyma as much as possible would have been beneficial as the patient was having both diabetes mellitus and hypertension which are risk factors for chronic kidney disease. The pathological assessment revealed a circumscribed unencapsulated tumour with solid nests of round cells with moderately enlarged round nuclei and abundant deeply eosinophilic cytoplasm. A central satellite scar was present in the tumour. The tumour cells showed no perinuclear halo or raisinoid nuclei. No clear cells were present. There were no papillary structures. No tumour emboli were noted within the renal vein. Characteristically oncocytomas present as well-circumscribed tumours with a mahogany brown colour, and with a central scar. They lack necrotic and hemorrhagic areas present in renal cell carcinoma. But in a small cohort of cases, a diagnostic

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uncertainty may arise due to remarkable similarity to chromophobe renal cell carcinoma. But the majority of renal oncocytomas have distinct cytoarchitectural features as mentioned above that allow accurate diagnosis [4].

### Conclusion

The renal oncocytomas are renal epithelial tumours with an excellent prognosis. Imaging studies often cannot differentiate between oncocytoma and renal cell carcinoma. Partial nephrectomy is the standard treatment modality that provides comparable oncological outcomes to that of nephrectomy while preserving healthy renal parenchyma. Histological assessment in the majority of the cases can confirm the diagnosis.

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

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### Learning Points:

- Renal oncocytoma is a benign renal epithelial tumour
- Imaging studies cannot reliably differentiate between oncocytoma and renal cell carcinoma.
- Partial nephrectomy is the standard modality of treatment.
- Histological assessment confirms the diagnosis.