

# A Case of Juxtaglomerular Cell Tumor of the Kidney Treated with Retroperitoneal Laparoscopy Partial Nephrectomy

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To the Editor: A 32-year-old man was referred to First Affiliated Hospital of Zhengzhou University with a right kidney tumor which was found in his annual medical examination. His blood pressure was found high more than half a year ago, and it was 138/102 mmHg on admission. He had no family history of hypertension. His serum potassium level was normal. We failed to test his plasma renin activity.

An abdominal computed tomography scan showed a 3-cm isodensity and weak contrast-enhancing but delay-enhancement solid mass in the right kidney cortex [Figure 1a and 1b]. Renal Doppler was also ordered which revealed normal renal vessels with normal flow pattern. An ultrasonography confirmed a well-defined rounded and hypoechoic solid mass at the same location. Selective renal arteriography showed an abnormal staining on the upper pole of the right kidney. The blood supply is not abundant [Figure 1c].

It was suspected that this kidney tumor was malignant. After the patient's written informed consent was obtained, the right kidney tumor was removed by retroperitoneal laparoscopy partial nephrectomy. The surgery lasted 115 min and renal hilum clamping time was 17 min. The bleeding was negligible. The patient had an uneventful recovery.

The tumor was well-capsulated and its cutting surface was taupe. Histological and immunohistochemical examinations revealed that the tumor had inconspicuous nuclear morphism and plenty of renin granules in the cytoplasm. In other words, the tumor was juxtaglomerular cell tumor (reninoma) [Figure 1d and 1e]. The blood pressure was stable in the surgery. A few days after the operation, the patient's blood pressure had been normalized without any hypotensor.

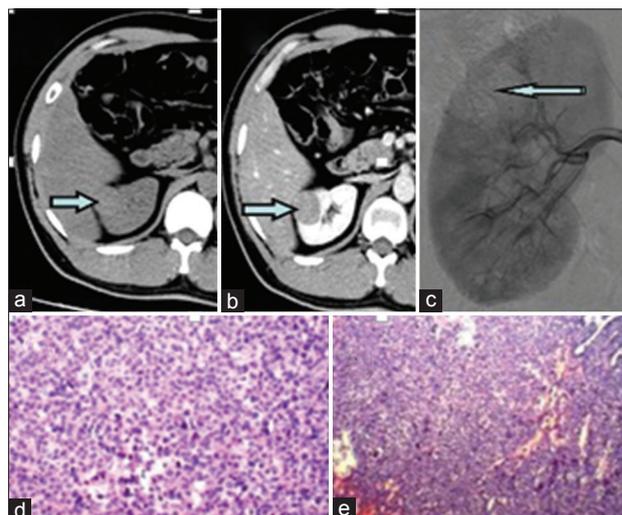
Reninoma should be considered when a young man was found a kidney tumor and also with hypertension with or without hypokalemia and with no evidence of renovascular disease. As far as we know, about 100 cases of reninoma have been reported.<sup>[1]</sup> Majority of the cases with reninoma are benign.<sup>[2]</sup> This patient was successfully treated with retroperitoneal laparoscopy partial nephrectomy.

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Nil.

## Conflicts of interest

There are no conflicts of interest.



**Figure 1:** (a and b) An abdominal computed tomography scan showed an isodensity and weak contrast-enhancing but delay-enhancement solid mass in the right kidney. (c) Selective renal arteriography showed an abnormal staining on the upper pole of the right kidney. The blood supply is not abundant. (d and e) Histological and immunohistochemical examinations revealed that the tumor had inconspicuous nuclear morphism and plenty of renin granules in the cytoplasm (H and E staining, Original magnification, d:  $\times 100$ , e:  $\times 40$ ).

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