

Oncology

A case report of one of the largest (9900 cm³) clear cell renal carcinoma removed in Asia

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ABSTRACT

Introduction: Giant renal cell carcinoma (volume more than 1000 cc) is a rare case. Management included surgical resection combined with targeted therapy.

Case presentation: We reported a case of giant clear cell renal carcinoma with 9.900 cm³ of total volume, that required surgical resection of the tumor. This is the largest giant clear cell RCC reported in Asia.

Discussion: Giant renal cell carcinoma management without targeted therapy was not optimal. Multimodal therapy was recommended for better outcome.

Conclusion: Surgical resection of Giant RCC is challenging, for that reason targeted therapy is recommended to be the alternative regardless the outcome.

Introduction

Giant renal cell carcinoma (RCC) is a rare case. Giant RCC was found to grow slowly at about 0.06–0.39 cm annually.¹ A giant renal cell carcinoma is unusual because of the slow growth rate and the development of imaging techniques.² A case report by Oviedo et al. found the largest RCC in the world that successfully resected at 28 × 25 × 15 cm and a total volume of 10,500 cm³. They also stated that surgery offers several options for patients with RCC.¹

In this case report, we present a giant renal cell carcinoma, which was the largest giant clear cell RCC ever reported in Asia, that required surgical resection of the tumor.

Case report

The study was conducted a case of giant renal cell carcinoma who required surgical resection of the tumor at Hasan Sadikin General Hospital - Indonesia. Diagnosis was made based on history taking, physical examination, CT-Scan, and confirmed by histopathological examination. Our case included a 9.900 cm³ renal mass. In our knowledge, this is the largest giant clear cell RCC ever reported in Asia.

A 62-years-old man came complaining of a left abdominal lump that

had continued to grow for the last five years accompanied by swelling on the waist region. CT scan detected an inhomogenous isodense lesion with calcification in the left kidney (Fig. 1). The patient was diagnosed with a left kidney tumor T4N0M0. Intraoperative findings showed a left kidney measuring 22 × 25 × 18 cm and weighing 5 kg (Fig. 2). We performed left cytoreductive nephrectomy to the patient. Histopathological examination found clear cell carcinoma with positive margin, Fuhrman grade II (Fig. 3). There was no complaint during the 1 year follow up after treatment even without targeted therapy.

Discussion

Most of the reported giant cell carcinomas were chromophobe or sarcomatoid type.³ There were two options for management of giant RCC. First, cytoreductive nephrectomy for primary tumor resection and second was targeted therapy.⁴

Surgical therapy is the gold standard for the management of renal carcinoma. But to treat giant renal cell carcinomas, targeted therapy instead of immunotherapy is recommended therapy followed by surgical resection.¹ Targeting agents are also superior to immunotherapy in prolonging survival. Several targeting agents, such as sunitinib, temsirolimus, and sorafenib, have been used to treat patients with giant

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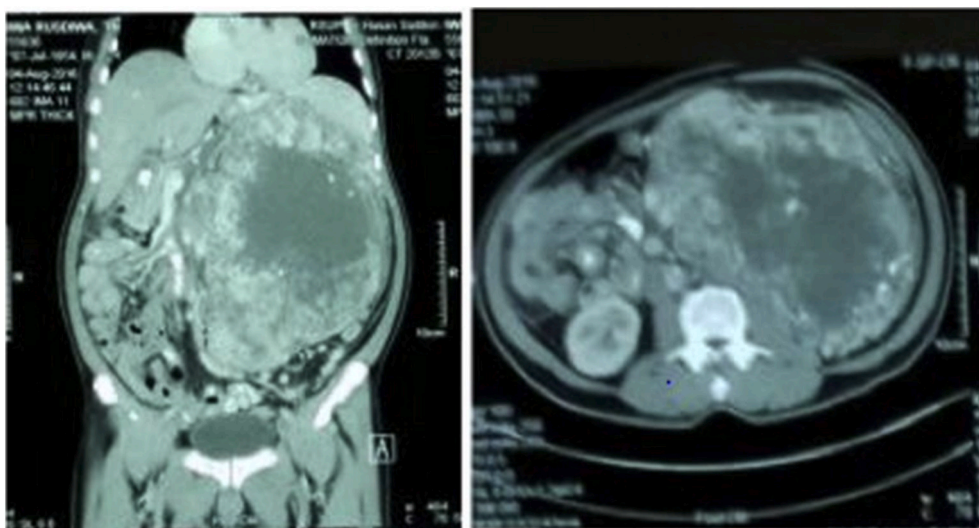


Fig. 1. CT-scan showed mass originated from the left kidney measuring 20 × 18 × 26 cm pressing surrounding organs.



Fig. 2. Intraoperative discovery. The left kidney measures 22 × 25 × 18 cm and weighted 5 kg.

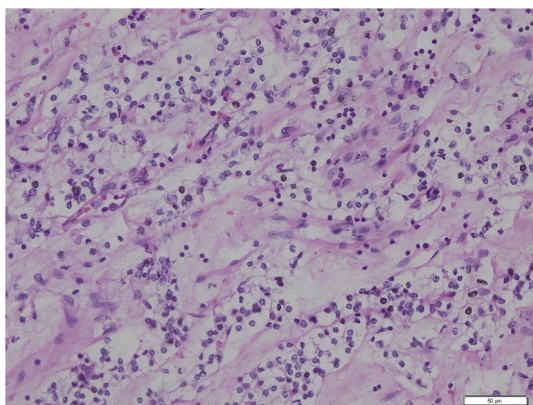


Fig. 3. Microscopic view (200x HPF) of left kidney showed clear-cell carcinoma.

renal cancer. Response to treatment has traditionally been based on measurement of tumor size reduction ($\geq 30\%$) using the Response Evaluation Criteria in Solid Tumor/RECIST).⁵

Conclusion

Giant clear cell RCC are rare cases. Giant RCC case that we reported in this literature was a giant clear cell RCC that might be the largest ever reported in Asia. Surgical resection of Giant RCC is challenging, for that reason targeted therapy is recommended to be the alternative regardless the outcome.

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Informed consent

Written informed consent was obtained from the patient(s) for their anonymized information to be published in this article.

Guarantor

Sawkar Vijay Pramod.

Contributorship

Not Applicable.

Declaration of competing interest

The Authors declares that there is no conflict of interest.

I confirm that I have prepared a separate document containing ALL of the below declarations which I will subsequently upload under the

‘Declarations’ file type when submitting my manuscript.

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