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Giant Renal Cell Carcinoma: A Rare Case Report

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Abstract

Renal cell carcinomas account for approximately 80–85% of primary renal tumors and are the most common form of malignant renal tumor.Though renal cell carcinoma is a fairly common disease, it is extremely rare to encounter a case providing a resected mass as large as over 5kg and >20cm in weight and size. In the current era, because of the prevalence of sonography, renal cell carcinoma usually can be detected in the early stages and a huge tumor is rarely encountered. Amongst all the variants,clear cell type is most common. But recently, we found a huge papillary -type renal cell carcinoma in a 61 years old man with abdominal lump, that weighed approximately 5.5 kg, which is very rare.

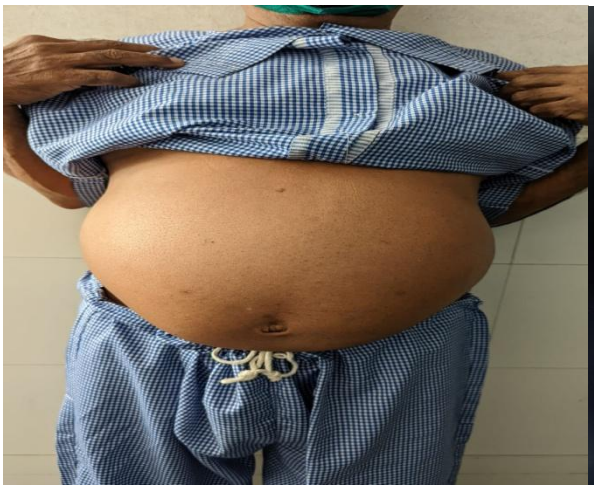
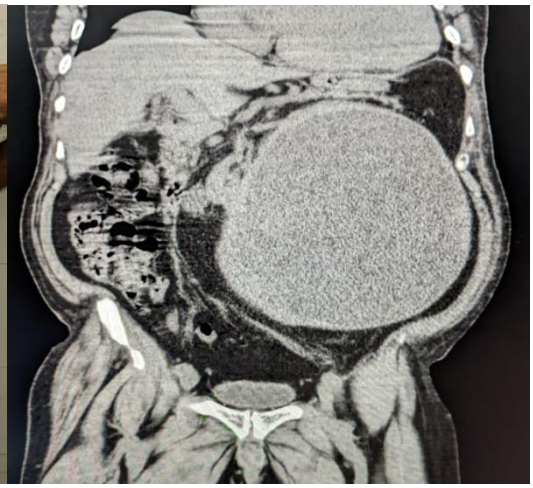
Keywords: NIL

Introduction

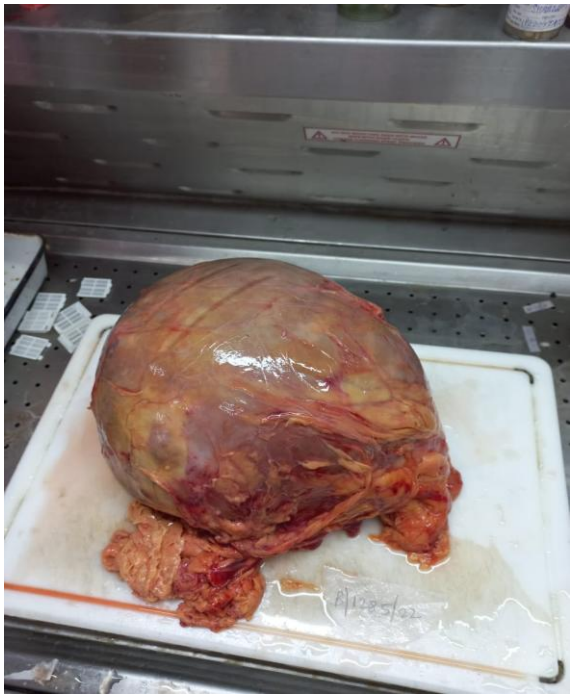
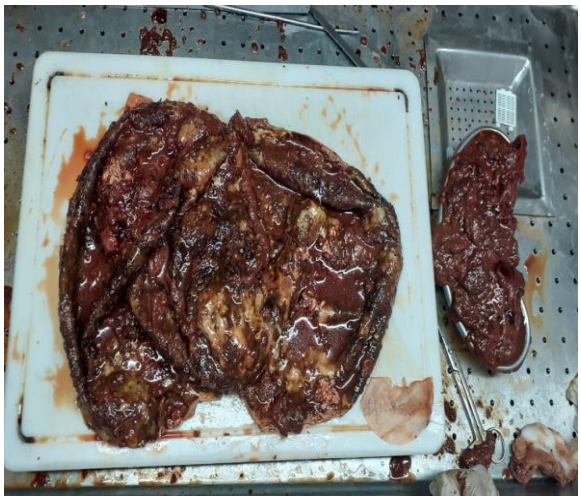
Giant renal cell carcinoma (RCC) is a rare case. Giant RCC was found to grow slowly at about 0.06–0.39 cm annually(1). A giant renal cell carcinoma is unusual because of the slow growth rate and the development of imaging techniques(2). Because of the slow growth rate, metastasis may occur during the long period over which a tumor becomes huge. Some reports indicated that tumor size plays an important role in the prognosis. Kunkle et al stated that the metastatic disease increased by 22% with every 1-cm increase in tumor size.(3) The relationship between tumor size and prognosis in patients with renal cell carcinoma is also confirmed by the tumor node metastasis staging system, with the 5-year survival rate decreasing from approximately 80–100% in T1 cases to approximately 50–80% in T2 cases.(4)

Case presentation

A 61 years old male came to our center with complaints of lump in abdomen over left side since 6 years.He had left flank fullness.He had complaints of hematuria of recent onset. . that had continued to grow for the last five years accompanied by swelling on the waist region Diagnosis was made based on history taking, physical examination, CT-Scan, MRI and confirmed by histopathological examination. that had continued to grow for the last five years accompanied by swelling on the waist region. His biochemical investigation revealed hemoglobin – 12 g/dl,serum creatinine – 5.0 mg/dl. Other biochemical parameters were within normal limits. Noncontrast computed tomography of the abdomen scan detected a cystic mass measuring 22 x 20 x 20cm(Vol 4.4L) lesion arising from lower pole of left kidney extended upto left lower abdomen and crossing midline with calcification in the left lateral part of mass with no extension into renal vein and IVC and no fat stranding.Further MRI was also done which showed T2 hypersignal intense predominantly cystic mass lesion of size 23.5 x 23.6 x 19.7 cm and thick pseudocapsule and internal septations within(Fig. 1).

After preoperative workup and optimization.Left radical nephrectomy was done under general anesthesia. Left flank approach was taken with. The left renal mass was measuring approximately 25 cm × 12 cm [Figure 2] with extension up to the diaphragm superiorly and inferiorly into the pelvis and crossing midline. Surgery was very challenging as there were dense desmoplastic reactions around Gerota's fascia. There were dense adhesions with peritoneum and pancreas. Mass was extending from the diaphragm till the pelvis. The blood loss was minimal and post operative recovery of patient was uneventfull.Grossly, the mass was cystic and there was 4.5 Litres of necrotic fluid.(Fig 3 and 4)The histopathological diagnosis was Papillary cell type renal cell carcinoma.

Discussion

Giant renal cell carcinoma has been defined as renal mass exceeding 20 cm in size and volume of more than 1000 cc.(2,5) It is extremely rare due to its indolent course with a growth rate of 0.06–0.39 cm annually and widely available imaging facilities. Most of the reported cases were of chromophobe or sarcomatoid type(6) In our case, the patient neglected the first symptom of lump in abdomen 6 years ago and presented to us with a huge left renal mass (25 cm × 12 cm) .The renal mass was huge, but there was no distant metastasis.

Whereas, Chueh *et al*.(5) reported a large clear cell RCC with renal vein thrombosis, and multiple hepatic and pulmonary metastases. Radical nephrectomy was performed with intraoperatively

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multiple regional unresectable lymph nodes, and there was profound bleeding with a total blood loss of 8000 ml. Targeted therapy with sunitinib was started after the surgery. There was rapid growth of metastases during follow-up, and the patient survived for 6 months only. Prognosis was very poor even after radical nephrectomy and targeted therapy.

Pramod *et al*(7) reported the largest giant clear cell RCC (25 cm × 22 cm × 18 cm) from Asia with a total volume of 9.900 cm^3. Cytoreductive nephrectomy was performed but with positive surgical margin on histopathological examination. They reported no patient complaint during 1-year follow-up even without targeted therapy.

The benefits of renal artery angioembolization preoperatively include a decreased blood loss intraoperatively, the creation of a tissue plane of edema facilitating dissection, and reduction in tumor bulk including the extent of vascular thrombus. Renal artery angioembolization is a safe and effective technique that is well tolerated with few complications, particularly if the time interval from embolization to surgery is reduced to less than 48 h(8).But angioembolization has side effects like pain,necrosis,infective foci causing abcess,infarcts,bleeding.

Conclusion

Giant papillary RCCs are extremely rare, they are difficult to operate, and there could be significant blood loss.If operated with proper care and technique,large tumours can be handled and operated without blood loss in safe manner.Angioembolization is not mandatory and not done at our centre.

References

1. Oviedo R.J., Robertson J.C., Whithaus K. Surgical challenges in the treatment of a giant renal cell carcinoma with atypical presentation: a case report. *Int J Surg Case Rep.* 2016;24:63–66
2. Wu M.Y., Liaw C.C., Chen Y.C. A giant sarcomatoid renal cell carcinoma. *Nephrol Dial Transplant.* 2007;22:952e3.
3. D.A. Kunkle, P.L. Crispen, T. Li, R.G. Uzzo Tumor size predicts synchronous metastatic renal cell carcinoma: implications for surveillance of small renal masses J Urol, 177 (2007), pp. 1692-1696
   Frank, M.L. Blute, B.C. Leibovich, J.C. Cheville , C.M. Lohse, H. Zincke Independent validation of the 2002 American Joint Committee on cancer primary tumor classification for renal cell carcinoma using a large, single institution cohort J Urol, 173 (2005), pp. 1889-1892
4. Chueh KS, Yeh HC, Li CC. A huge renal cell carcinoma: Case report and literature review. Urol Sci 2013;24:58-60
5. Moslemi MK, Hosseini SJ, Firoozabadi MH. A huge renal cell carcinoma, nine years after its primary diagnosis and obligate observation. Case Rep Oncol2010;3:32633.
6. Pramod SV, Safriadi F, Hernowo BS, Dwiyana RF, Palgunadi IN. A case report of one of the largest (9900 cm^3) clear cell renal carcinoma removed in Asia. Urol Case Rep 2020;32:101208
7. Li D, Pua BB, Madoff DC. Role of embolization in the treatment of renal masses. Semin Intervent Radiol 2014;31:70-81.

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