International Surgery Journal
Rajput M et al. Int Surg J. 2021 Mar;8(3):1036-1037
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: https://dx.doi.org/10.18203/2349-2902.isj20210945

Case Report

Incidentally detected multilocular cystic renal cell carcinoma: a case report

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Received: 29 January 2021
Accepted: 16 February 2021

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ABSTRACT

Multilocular cystic renal cell carcinoma (RCC) is a tumor of low-grade malignant potential which is curable by surgical resection. Here, we report a case which was incidentally detected during evaluation of right flank pain. It's very challenging to differentiate such lesions from conventional clear cell carcinoma. However, it has good prognosis and amenable to surgical resection.

Keywords: Multilocular cystic RCC, Bosniak type III cyst, Renal cyst

INTRODUCTION

Multilocular cystic renal cell carcinoma is a tumor of low grade, with low malignant potential, comprising approximately 1-2% of all renal tumors. It has better prognosis compared to other subtypes and curable by surgical resection, either simple nephrectomy or nephron-sparing surgery.[1, 2]

CASE REPORT

65-year-old male patient presented with chief complaint of right flank pain intermittent, dull aching, non-radiating for 1 month. USG revealed impacted right PUJ calculus (1.5 cm) with HDN right kidney with 89x68 mm left complex cyst in lower and interpolar region. CT IVU suggested impacted Rt PUJ calculus, large complex multi cystic SOL measuring 88x76x70 mm with thick and thin enhancing internal septa and thicked wall S/O Bosniak type III lesion with compression of pelvis by cystic lesion. DTPA showed eGFR 50.38 ml/min on right side and 37.12 ml/min on left side. Right DJ stenting and left nephrectomy was performed. Biopsy report was multilocular cystic renal cell carcinoma. The gross examination of the kidney revealed a multiloculated cystic spaces with areas of hemorrhage and necrosis and presence of mucinous material. Histopathological examination revealed cyst wall lined by single or multiple layers of clear cells with well-defined cytoplasmic borders and small nuclei. Immunohistochemistry with vimentin and EMA showed strong membranous positivity.

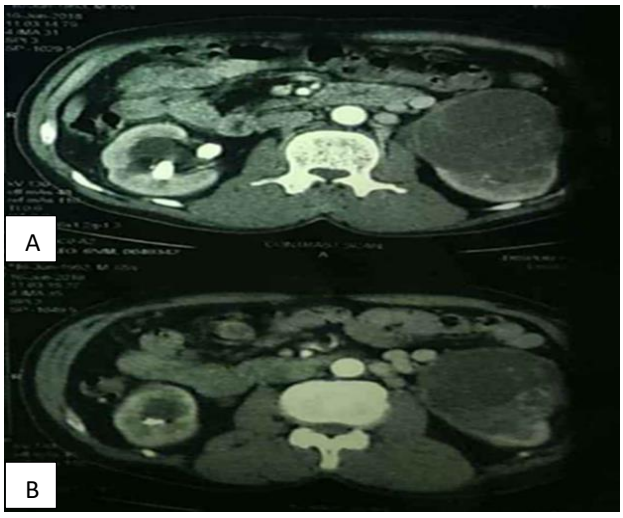

Figure 1: Contrast CT abdomen.

Figure 2: Post-operative specimen.

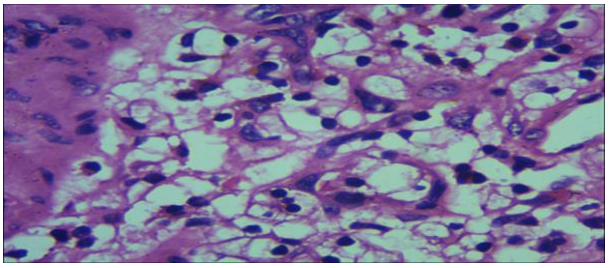

Figure 3: Microscopic examination showing cyst Wall lined by multiple layers of clear cells.

DISCUSSION

MCRCC can be diagnosed using the following diagnostic criteria (2004 WHO classification of kidney tumors).[3] 1) presence of circumscribed, non-communicating, expansile nodule composed entirely of cysts and septa 2) cysts should be lined by single layer of low-grade clear cells; no papillary growth should be identified and the cysts should be separated by fibrous septae 3) the septae may have groups of low-grade clear cells. These groups must not be expansile nodules and must not show infiltrative growth. Nuclei should be of low grade (1 or 2).

Halat et al conducted a study in 2010 in which they performed fluorescence *in situ* hybridization (FISH) analysis for 3p deletion on samples from MCRCC and compared the findings with those from a population of similarly low grade conventional clear cell RCC. Deletion of 3p was observed in 74% of MCRCC and in 89% of clear cell RCC.[4] Tosaka et al ascertained the outcome of 38 patients with MCRCC.[5] Their 10-year survival rate and nonrecurrence rate was 97.3 and 90.3%, respectively. Bielsa et al reported a lower 5-year survival rate (83%) in 25 cases.[6]

CONCLUSION

MCRCC has good prognosis and misdiagnosis of conventional clear cell RCC should be avoided.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Rajput M, Sarma P, Deka PM. Incidentally detected multilocular cystic renal cell carcinoma: a case report. Int Surg J 2021;8:1036-7.