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CHROMOPHOBE RENAL CELL CARCINOMA: REPORT OF A RARE CASE OF RENAL CANCER

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INTRODUCTION

Renal cell carcinoma (RCC) is a heterogeneous group of neoplasms derived from the renal tubular epithelial cells[4]. The incidence of RCC in the Malaysian population is 1.9 per 100,000. Chromophobe renal cell carcinoma (ChRCC) is a rare subtype of renal cell carcinoma (RCC), accounting for 4-6% of all RCC cases worldwide[2,3]. Generally, ChRCC affects both genders equally[3] in middle age and has a more favorable prognosis compared to other RCC subtypes[1,3]. ChRCC may be detected as an incidentally or, less commonly may manifest with clinical symptoms. Surgical resection of the tumor or organs is the mainstay of treatment for chRCC is surgical resection[4]. This case report details 2 ChRCC cases among 57 RCC patients diagnosed in our center from 2013 until 2023.

CASE REPORT

Both cases involved females aged between 40 to 60 years, diagnosed in 2021 and 2022. Both patients presented with a large abdominal mass. One patient underwent proper investigations and imaging modalities prior to operation, while the other case was discovered incidentally during gynecologic operation. Both cases underwent radical nephrectomy and unveiled huge, low pathological staging renal tumor with no evidence nodal involvement of ChRCC: pT3N0 (22.5cm x 13.5cm x 15.0cm) and pT2N0 (13.0cm x 12.5cm x 10.0cm), similar patterns of tumor growth and immunochemistry findings. Neither case exhibited local recurrence nor distant metastasis on Computed Tomography and Positron Emission Tomography that were performed for both. One patient was planned for targeted therapy but the treatment forsaken due to financial constraints. These patients are under surveillance at our center and reported have no evidence of recurrent or disease progression up-to-date.

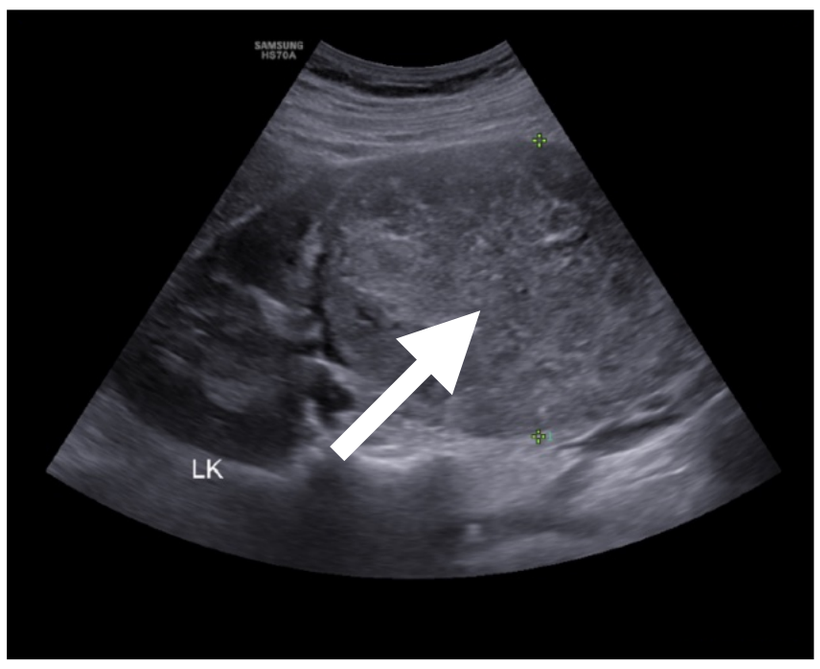

Figure 1. Huge heterogenous solid lesion (arrow) arising from lower pole of left renal, suspicious of malignancy.

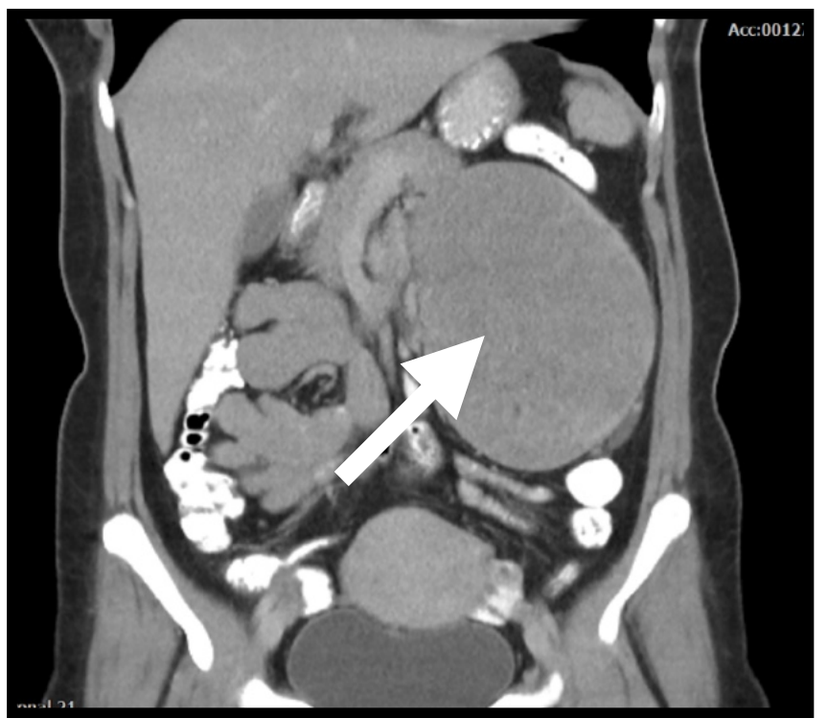

Figure 2. Huge left renal mass (arrow), differentials include renal cell carcinoma or oncocytoma.

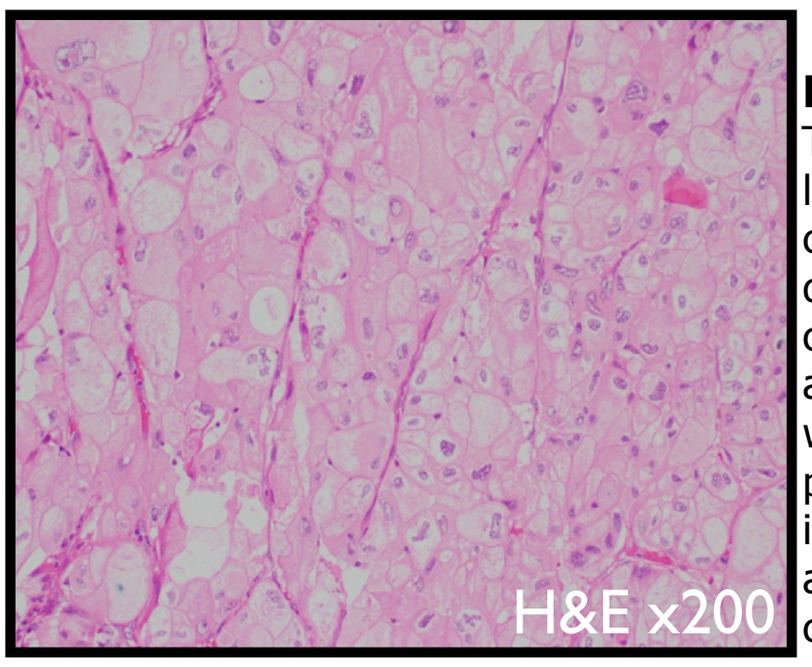

Figure 3. Tumor composed of large polygonal cells, sharply defined plant-like cell borders and abundant cytoplasm with reticular pattern. Nuclei are irregular, wrinkled and angulated with coarse chromatin.

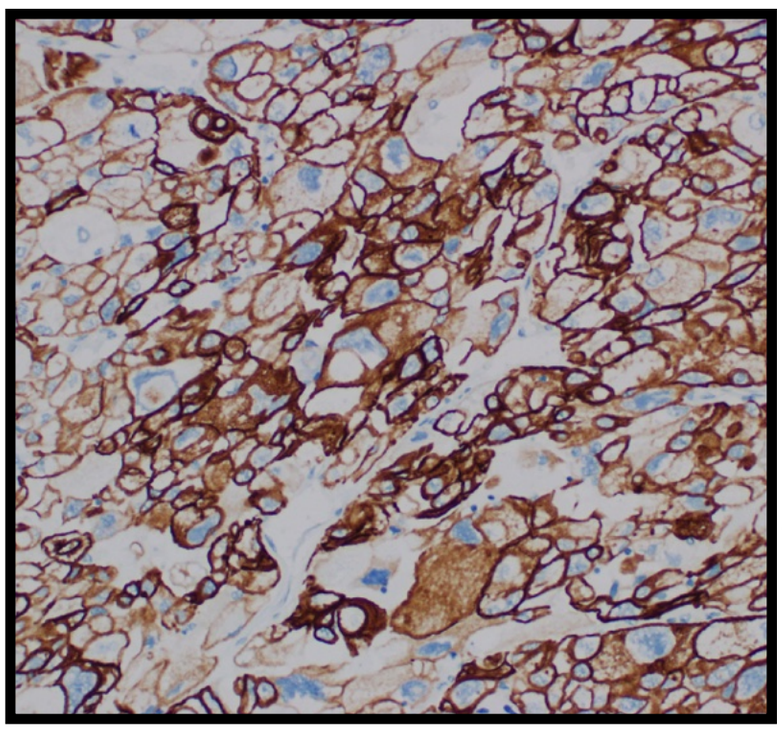

Figure 4. Tumor cells with diffuse and strong positivity to CK7.

DISCUSSION

The first ChRCC in humans were first described by ***Thoenes et al*** in 1985[1,2]. ChRCC is the most distinct subtype of RCC, often developing sporadically or discovered incidentally on imaging[4]. As mentioned before, this tumor has a favorable prognosis with disease recurrence or progression is rare. Considering that ChRCC is a low-stage and low-grade subtypes of RCC, lymph nodes involvement and distant metastases are possible but infrequent, seen in 2-4% and 1-4% respectively[4]. Fortunately, there is no evidence of tumor recurrence or disease progression reported to the patients in this report. While ChRCC often requires multimodal therapy such as chemotherapeutic and targeted therapy, surgery remains the mainstay of treatment to treat ChRCC[3], either partial nephrectomy, radical nephrectomy or nephron-sparing surgery.

CONCLUSION

Up-to-date, only a few authors have studied outcome in patients with ChRCC[1]. This report highlights that ChRCC is a relatively rare subtype of RCC with an excellent prognosis. The disease associated with earlier stage, low grade tumors and longer overall survival compared with clear cell RCC as cited by many literatures, despite been managed by surgery alone.

REFERENCE

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