

Mucinous Tubular spindle cell carcinoma of the Kidney in Post renal transplant recipient – A new unusual variety

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Introduction

Mucinous tubular and spindle cell renal cell carcinoma (MTRCC) is a rare subtype of Renal carcinoma, recognized as a separate entity in the 2004 World Health Organization (WHO) tumor classification. As the name implies this sub type of renal cell carcinoma is composed of three salient elements: tubules, spindle cells and extracellular mucinous/myxoid stroma. Earlier these tumours were classified under low-grade collecting duct carcinoma, low-grade myxoid renal epithelial neoplasm with distal nephron differentiation, low-grade tubular mucinous renal neoplasm and spindle and cuboidal renal cell carcinoma. Till now, less than 50 cases of these tumor have been reported in the literature. Most likely site of origin is Loop of Henle. In this case study we are discussing such a sub type of tumour incidentally detected in a 59 year old post renal transplant recipient in the native kidney during regular annual follow up.

Materials and Method

It is a retrospective case report. A 59 year old male patient, who is a renal transplant recipient since August 2005, presented to us for a regular annual follow up. Ultrasound of the abdomen revealed an incidental echogenic lesion in the lower pole of the native left kidney. Further CT imaging revealed bilateral small kidneys with an enhancing exophytic lesion of about 1.7cm x 2cm size in the lower pole of the left kidney (Fig. 1). Native right kidney and the transplant kidney in the right iliac fossa were normal. Left Laparoscopic Radical Nephrectomy was performed after preparing the patient.

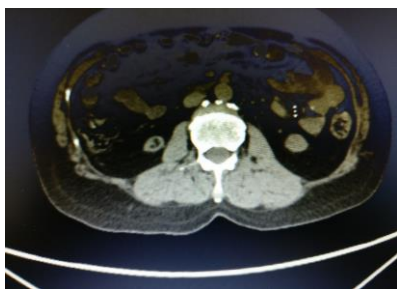


Fig. 1: CT Imaging Left Kidney Lower pole tumour

Results and Observations

Gross examination of the left radical nephrectomy revealed a well-demarcated yellowish brown, exophytic renal mass occupying the lower pole of the kidney. Histopathological examination revealed low grade Mucinous tubular spindle cell variant of Renal cell carcinoma. Immunohistochemical staining was positive for CK7, AMACR and Vimentin (Fig. 2). No evidence of Papillary or sarcomatoid transformation was noted.

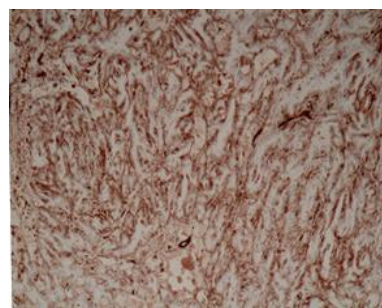


Fig. 2: Vimentin IHC stain 40X magnification

Conclusion

Mucinous Tubular spindle cell carcinoma (MTSCC) is a rare type of renal cancer with less than 1% prevalence. This case was diagnosed incidentally during a regular follow up imaging in post renal transplant status. In the set up of post renal transplant recipient status, the most common associated malignant tumour is acquired renal cystic disease with Clear cell renal cell carcinoma transformation. But in this case, the tumour is a non clear cell variant in a non cystic disease kidney, as revealed by the imaging. MTSCC is a female predominant disease which is contrary to our case. MTSCC is generally a low grade disease with a good prognosis. This case is presented for its rarity and its incidence in post renal transplant recipient status.

Message

Irrespective of the presence or absence of renal cysts in a post renal allograft recipient, all require follow up with regular imaging to rule out new incidental lesions in the native kidneys. MTSCC of the kidney are also to be considered in the differential Diagnosis of mass lesions in post renal transplant recipient patients.

References

1. Eble JN, Sauter G, Epstein JI, Sesterhenn IA. The World Health Organization Classification of Tumours of the Urinary System and Male Genital System. Lyon, France: IARC Press; 2004
2. Zhang Y, Yong X, Wu Q, Wang X, Zhang Q, Wu S, et al. Mucinous tubular and spindle cell carcinoma and solid variant papillary renal cell carcinoma: a clinicopathologic comparative analysis of four cases with similar molecular genetics datum. *Diagn Pathol* 2014;9:194. doi:10.1186/s13000-014-0194-8. 19.
3. Tagaki k, Yamada, Uno M, Komeda H, Fujimoto- A case of mucinous tubular and spindle cell carcinoma of the kidney].[Article in Japanese] *Hinyokika Kyo* 2010;56(3):159-62.