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MRI diagnosis of a rare subtype of kidney cancer

Krzysztof Aksędowski[1,B], *Artur Komorowski*[2,A,C-D]

1 Department of General Surgery, Edmund Biernacki Hospital, Mielec, Poland
2 Optimed MRI, Nowy Sącz

A – Research concept and design, B – Collection and/or assembly of data, C – Data analysis and interpretation, D – Writing the article, E – Critical revision of the article, F – Final approval of the article

Abstract

Mucinous tubule and spindle cell carcinoma (MTSCC) of the kidney is a rare renal tumor generally considered of low malignant potential. Radiological diagnosis of the MTSCC is frequently difficult as those tumors tend to present as more discrete changes than those typical for classical renal cell cancer. The radiological diagnosis of a MTSCC can be challenging. It is important to establish correct diagnosis preoperatively in order to qualify patients for NSS.
Keywords: Mucinous tubule and spindle cell carcinoma, Radiological diagnosis of the MTSCC

Introduction

Mucinous tubule and spindle cell carcinoma (MTSCC) of the kidney is a rare renal tumor generally considered of low malignant potential. Described for the first time in 1996 [1] and recognized by WHO in 2004 [2], it is frequently managed by partial kidney resection, also known as nephron sparing surgery (NSS) [3]. Radiological diagnosis of the MTSCC is frequently difficult as these tumors tend to present as more discrete changes than those typical of classical renal cell cancer [4].

Imaging

Rare type of renal cancer can be easily mistaken for benign leasions especially in young adults. Regarding mucinous tumors, some sequences may mimic cysts and normal tissue. The most striking feature is their low value on ADC maps, which is a hallmark of high-cellularity and very suggestive of malignancy.

On coronal T2 weighted scans, lesions are difficult to identify, but on ADC maps they are clearly visible with low values (DWI does not show increased diffusion).

✉ Corresponding author: Krzysztof Aksędowski; email: aksedowski@gmail.com

Clinical course

The patient was referred for surgery. A NSS procedure was performed. A 3.2 cm × 2.7 cm tumor was noted on the pathology report with a 0.8 mm free margin from the remaining healthy kidney tissue. The final diagnosis was T1a Mucinous tubular and spindle cell carcinoma with immunohistochemistry results of CD 10 (-) and CK 7 (+).

Conclusion

The radiological diagnosis of a MTSCC can be challenging. It is important to establish correct diagnosis preoperatively in order to qualify patients for NSS.

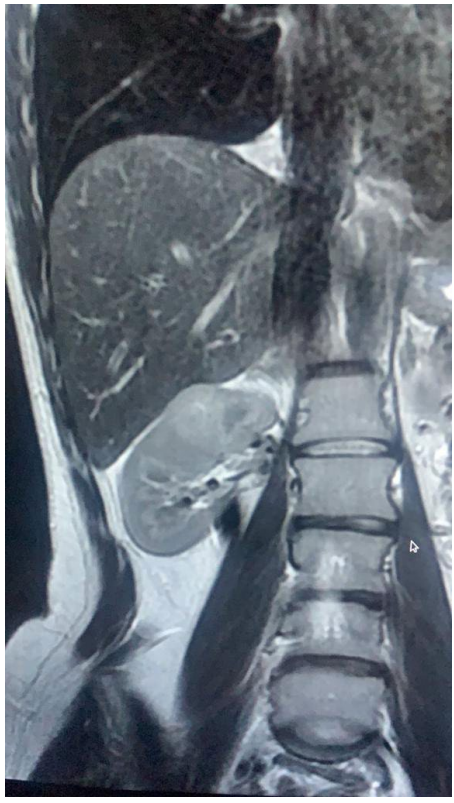

Fig. 1. MRI view of the right kidney mass

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