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Case Report

A Renal Cyst Bosniak III Revealing a Mixed Epithelial and Stromal Tumor: A Case Report

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ABSTRACT

Mixed epithelial and stromal tumor of the kidney is a rare tumor, most cases behave benignly, and the etiology remains unknown. It predominantly occurs in perimenopausal woman as a multiloculated cystic renal mass with a variable proportion of solid and cystic components. MEST may mimic many renal cystic pathologies, which makes its diagnosis difficult. The reference treatment remains surgery. We report here the case of a women with a renal cyst Bosniak III that the laparoscopic exploration and extemporaneous examination led to a MEST.

Keywords: Mixed epithelial and stromal tumor; Kidney

ABBREVIATIONS

MEST: Mixed Epithelial and Stromal Tumor

INTRODUCTION

Mixed epithelial and stromal tumor of the kidney is an uncommon complex neoplasm. Grossly, MEST are typically well circumscribed solid and cystic masses [1].

MEST is usually a benign tumor and local recurrences are rare. It predominantly occurs in perimenopausal women [2].

It is typically cured by nephrectomy, but in a few cases malignant transformation has been reported [3].

MEST is a rare and distinctive neoplasm accounting for 0.2% of all renal cancers [4].

We report here the case of a women with a renal cyst Bosniak III that the laparoscopic exploration and extemporaneous examination led to a MEST.

OBSERVATION

A 46 years old woman with no significant medical history, presented to our department with a 6 months history of right sided flank pain, and microscopic hematuria. The physical examination revealed right lumbar tenderness. Laboratory tests showed normal complete blood count, normal coagulation profile, and normal renal function.

The Abdominal Computed Tomography (CT) revealed a mid-renal cystic mass with thin wall and discreetly dense content containing multiple fine partitions which are not enhanced after injection of the contrast medium, this mass measures 81 × 81 × 86 mm (Figure 1).

On the ultrasound complement, it is a cystic formation containing fine avascular echogenic partitions.

Laparoscopic exploration revealed a cystic right medio renal and superior polar mass (Figure 2).

A frozen section was carried out which showed a mixed epithelial and stromal tumor without signs of malignancy. A total nephrectomy was performed. The final anatomopathological examination confirmed the histological nature of the mass (Figure 3).

DISCUSSION

Mixed Epithelial and Stromal Tumor (MEST) represents a recently described tumor entity of the kidney that was included in the WHO 2004 renal tumor classification [5]. These tumors have been described by diverse nomenclature in the past such as adult mesoblastic nephroma, solid and cystic biphasic tumor of the kidney and cystic hamartoma of the renal pelvis [2]. The tumor classically presents in perimenopausal to older women, at a mean age of 45 years as a combined solid and cystic mass. Most cases also have a history of exposure to estrogen therapy [3].

The patients usually present with nonspecific symptoms, such as flank pain, hematuria, or symptoms primarily suggestive of genitourinary infections [6]. Up to 25% cases are incidentally detected on imaging studies [7].

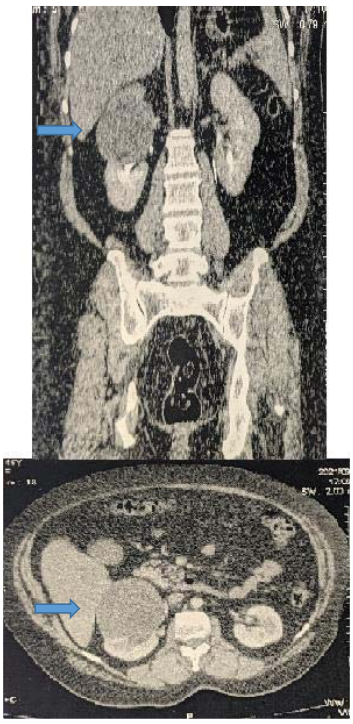

Figure 1: CT scan showing right renal cystic mass (arrow).

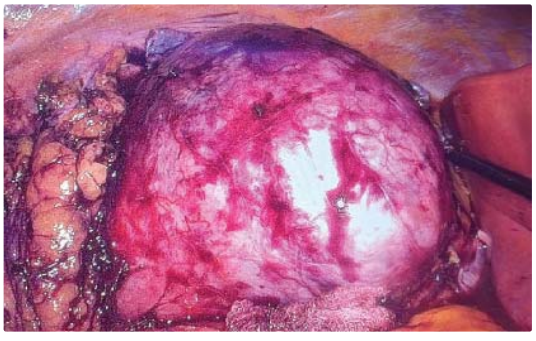

Figure 2: Laparoscopic view of renal cystic mass.

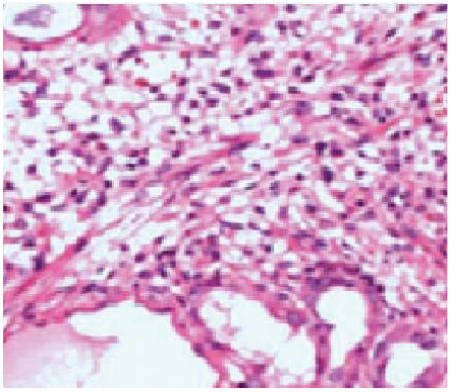

Figure 3: Characteristic biphasic components.

Our patient had a typical clinical presentation as described in the literature.

The classic CT appearance of MEST is that of a well-circumscribed, multiseptate cystic and solid mass with delayed contrast material enhancement, and is usually characterised as Bosniak III or IV cysts, a pure solid pattern has also been reported [8].

Majority of cases in the literature demonstrated a benign course without tumor recurrence [9].

On gross examination, reveals variably solid and cystic, tan to yellow, well-circumscribed, but rarely encapsulated lesions [6].

On microscopy, the tumor is classically biphasic comprising mesenchymal and epithelial elements. The mesenchymal component presents as fascicles of spindle cells with smooth muscle, fibroblastic, and/or myofibroblastic tissue interspersed with bundles of collagen. The epithelial components vary from round and regular tubules to more complex tubulopapillary structures with or without cystic dilatation [6].

The differential diagnosis includes adult cystic nephroma, complex renal cyst, angiomyolipoma with epithelial cysts, and multilocular cystic renal cell carcinoma [10].

A preoperative diagnosis of MEST cannot be reliably made based on imaging studies. As such these patients are subjected to radical or partial nephrectomy with a diagnosis of MEST made, in our case by frozen section, classically postoperatively on pathologic evaluation.

CONCLUSION

The preoperative diagnosis of MEST remains controversial. Otherwise, it should be considered as a possible diagnosis in cases of cystic renal mass, especially in peri-menopausal women or those who have received hormonal therapy.

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