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Renal Lipoma: a case report

Case Report

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Abstract: Renal lipoma is a very rare tumor that has only been described in about twenty cases in adults and in a single case in a child aged 2 years. This paper presents a renal lipoma in 63 year old female patient. The tumor size of 7.5x4.5 cm was located in her right kidney, clearly delineated from the surrounding kidney tissue, and histology was completely built of mature adipose tissue. This paper describes the case of a rare benign lipoma which histogenesis is yet not clearly understood.

Keywords: *Renal lipoma • Kidney • Benign tumor*

1. Introduction

Lipoma is a benign tumor of adipose tissue and it is one of the most common benign mesenchymal tumors. On the other hand lipoma in the kidney is a very rare tumor and so far only twenty cases have been described. In a review of literature and the WHO classification of tumors, renal lipoma is only mentioned as a possible benign tumor of the kidney [1,2].

2. Case report

In our paper we present a kidney lipoma in a 63 year old female patient. The tumor in the right kidney was detected by ultrasound, following a hematuria which appeared a month before the operation, which lasted several days and was accompanied with a pain in the right lumbal region. In a previous history of the disease, the patient was operated for appendicitis and uterine myomas. On admission to hospital the patient was in a good general condition without any pain. CT scan showed an expansive tumor size 7x5 cm, in the right kidney, which was dyed after an intravenous contrast injection. Because of a suspicion that it might be a malignant tumor of the kidney, patient has undergone right lumbotomy and right radical nephrectomy with drainage, afterwhich the material was sent for histopathological diagnosis. The obtained material were sent as three separated fragments: 1) fragment of adipose tissue which contained an adrenal gland with a preserved structure, without tumor tissue; 2) ureteral fragment length 2.5 cm without tumor tissue and 3) right kidney 12x8 cm in size, which on the cross section, in the central part of the hilus showed a clearly rounded yellow tumor, size 7.5x4.5 cm, of a soft consistency (Figure 1). Microscopically, tumor was clearly confined from surrounding renal tissue, and completely built of mature adipose tissue, without cellular atypia, mitoses, nuclear enlargement or hyperchromasia. Upond exclussion of any malignant characteristics of the tumor, the diagnosis of a renal lipoma was made (Figure 2). In the first days following surgery the patient presented with anginal pain, fever, and high level of CRP (284). The serum levels of creatinine were 136 and hemoglobin 109. Postoperative chest RTG and a CT scan, revealed a right basilar atelectasis and low transparency of left frenicocostal sinus of the pleura. Following a consul-

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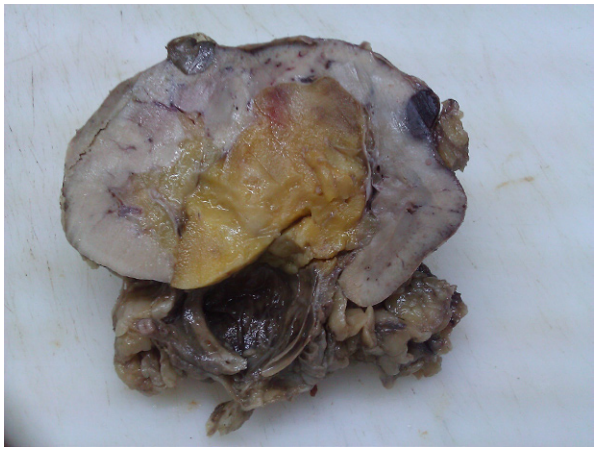

Figure 1. Yellow, soft, clearly limited tumor located in central (hilar) part of kidney - renal lipoma (gross appearance).

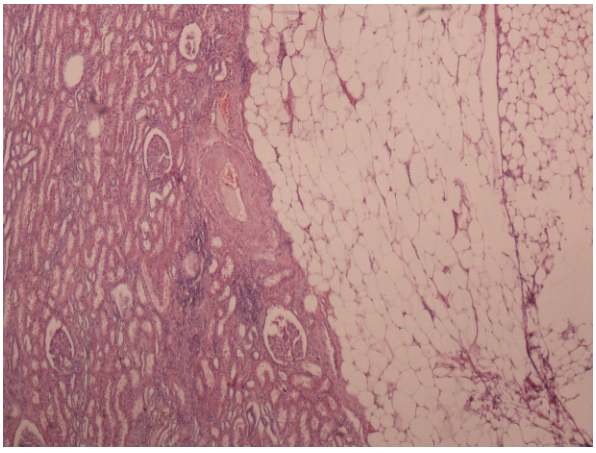

Figure 2. Renal Lipoma. Tumor (right) in the kidney (left), with expansive borders, completely build from mature adipose tissue, without cellular atypia and mitoses (HEx40).

tation with pulmologists and cardiologists, patient was treated with antibiotics and her condition has improved. Six months post-surgery, the patient is feeling well and with no signs of local recurrence.

3. Discussion

Renal lipoma is a very rare benign tumor of mature adipose tissue, whose origin, due to lack of sufficient data up to date, has not yet been clearly established. It is believed that the tumor arises from the pluripotent mesenchymal cells or from the renal embryonal adipose tissue [2,3]. Based on the available literature data, the most frequent localization of the tumor is in the renal cortex, and the tumor is most common in women of middle age [4]. Unlike most reported cases, in our case the tumor was located in the central part of the kidney, toward renal hilus. One such case of renal lipoma was previously described in a boy aged 2 years [5]. The most common symptoms that occur in larger tumors are hematuria and lumbal pain, which was also the case with our patient, and epigastralgia [3,6]. Small tumors are usually asymptomatic and can be detected by random examination or autopsy. The diagnosis of this tumor is based upon macroscopic and microscopic features that comprise clear edges of the surrounding renal tissue, and the tumor completely built of mature adipose tissue without signs of cellular atypia. In differential diagnosis, when it comes to kidney tumors containing adipose tissue, in the first place are angiomyolipoma and liposarcoma. The former is a tumor of a complex histological structure, which in addition to mature adipose tissue also has a connective-muscular tissue, while liposarcoma presents with unclear macroscopic margins and microscopically visible cells with atypia, also named lipoblasts. Rarity of this tumor however, does not give an opportunity to adequately define preoperative, primarily radiological diagnosis of this entity. Therefore, there are not clear recommendations on the most appropriate treatment for this tumor. Tumorectomia, partial kidney resection and nephrectomia are used to remove detected tumors, and type of resections depend mainly on the localisation and size of tumors. Chang et al. have desribed tumorectomia in a case of pedunculated renal lipoma with previosly frosen section detection, whereby tumor was benign, suggesting methods of choice for such type of tumor.

4. Conclusion

This paper presents the case of an extremely rare benign tumors of the kidney, whose exact origin is still not definitely established.

Conflicts of interest

The authors state no conflict of interest.

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