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Case Study of the Month

A Case of Renal Capsular Liposarcoma with Intracaval Fat Thrombus

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Abstract

A 58-yr-old woman was referred to our hospital for hematuria and a painless, rapidly growing abdominal mass. Computed tomography showed a rounded mass, 23 × 19 cm in diameter, spread over the left retroperitoneal space. A thrombus was observed occupying the left renal vein until the vena cava. Total left nephrectomy with excision of the retroperitoneal mass was carried out. A cavotomy highlighted the intraluminal thrombus, which was easily detached with a forced Valsalva maneuver. The pathologic examination demonstrated a well-differentiated liposarcoma of the renal capsule with fat thrombus in the vena cava. At 24 mo follow-up, there was no evidence of recurrence.

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1. Case report

A 58-yr-old woman was referred to our hospital for hematuria and a rapidly growing abdominal mass. The patient had undergone radical hysterectomy for uterine fibroma 13 yr earlier. She had no history of urologic disease, and blood tests showed normal results.

Physical examination showed a painless mass spread over the left half of the abdomen (Fig. 1). An abdominal ultrasound examination revealed a voluminous, heterogeneous, well-defined mass extending from the lower pole of the left kidney to the pelvis, with anechoic and hyperechoic images inside. Computed tomography (CT) was performed and showed a rounded mass, 23 × 19 cm in diameter, spread over the left retroperitoneal space, dislocating adjacent abdominal organs. The mass apparently arose from the left renal capsule and was characterized by a fatty mass with internal areas of fluid. The angiography showed a double left renal artery (Fig. 2). The left renal vein ran between the renal arteries and showed intravascular focal filling defects until the vena cava, which was detected as thrombus by ultrasonography performed with a contrast agent for ultrasound imaging (SonoVue, Bracco SpA, Milan, Italy; Fig. 3).

We carried out a total left nephrectomy with excision of the retroperitoneal mass (Fig. 4). A cavotomy was performed starting from the outlet of the left renal vein, and it highlighted a thrombus that was easily detached with a forced Valsalva maneuver caused by the anesthesiologist. The pathologic examination showed well-differentiated liposarcoma of the renal capsule. The tumor infiltrated the superior pole of the left kidney (Fig. 5). At 24-mo follow-up,

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Fig. 1 – Preoperative picture showing the abdominal mass.

the patient remained asymptomatic, without evidence of recurrence on control with CT scan.

2. Discussion

Sarcomas of the genitourinary (GU) tract are most commonly reported to be leiomyosarcomas (47% renal, 50% bladder, 57% prostate, and 19% paratesticular sarcomas), followed by liposarcomas [1,2]. Liposarcoma accounts for at least 20% of all soft-tissue sarcoma in adults, with a peak incidence between 50 and 65 yr of age and a male predominance. It may occur anywhere in the body, although the most common sites are the thigh and the retroperitoneum [3]. It could be difficult to establish the exact origin of a tumor that usually derives from fat, from

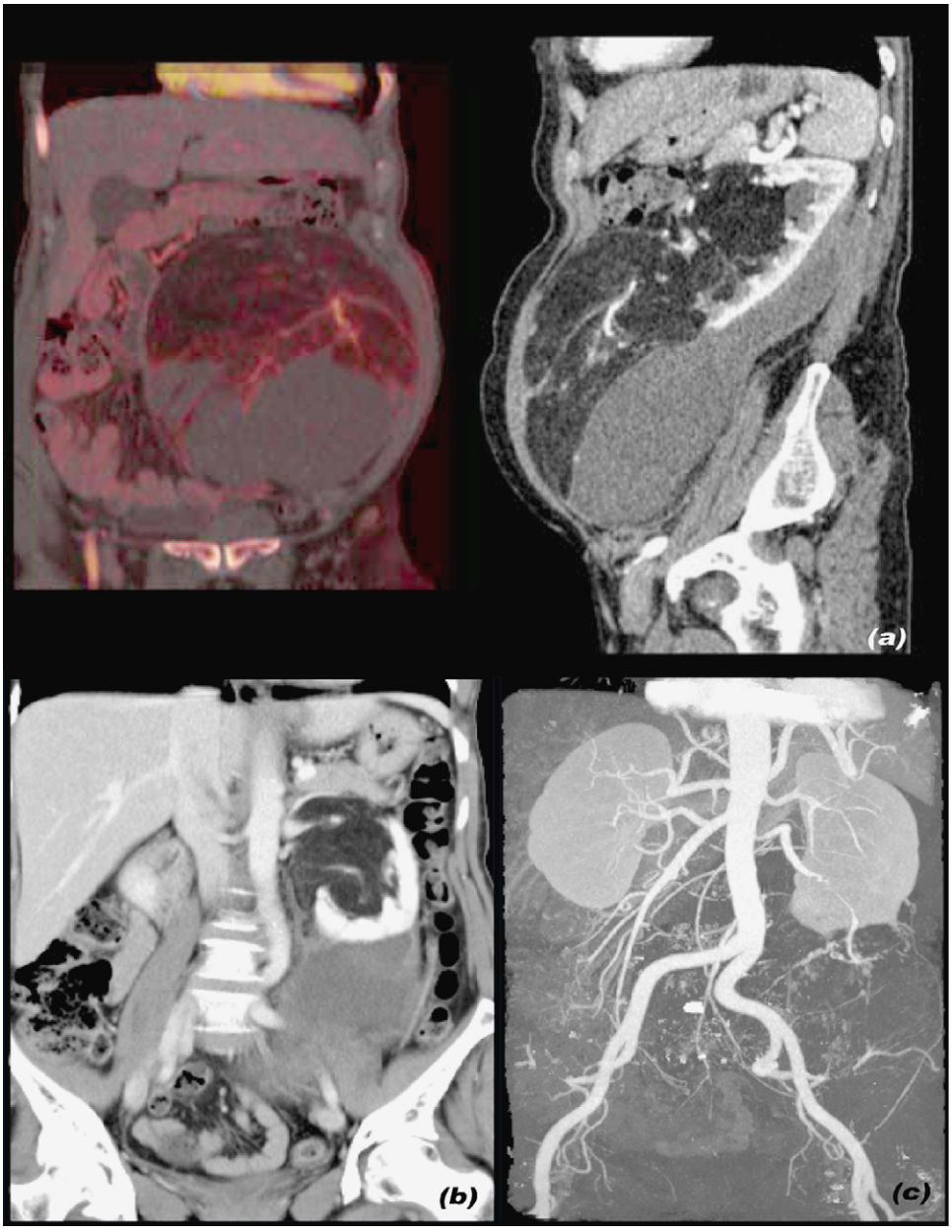

Fig. 2 – Preoperative computed tomography scan (a,b) showing the presence of a mass origining from the inferior pole of the left kidney and angiography (c) showing a double left renal artery.