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Pelvic Angiomyolipoma

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Abstract

Angiomyolipoma is a rare benign tumor most commonly found in the kidney and, infrequently, extrarenally. We report a case of pelvic angiomyolipoma in a male patient without stigmata of tuberous sclerosis. The patient presented with right retroperitoneal bleeding and was found to have bilateral renal angiomyolipomas as well as a pelvic mass with similar appearance as the other lesions. He underwent urgent embolization of the large right angiomyolipoma and subsequent robot-assisted left laparoscopic partial nephrectomy with simultaneous resection of the pelvic mass, which was well-tolerated. Pathology confirmed what is, to our knowledge, the only reported case of pelvic angiomyolipoma.

Angiomyolipoma, composed of blood vessels, smooth muscle, and adipose tissue, is the most common benign renal mesenchymal tumor.¹ Although angiomyolipomas commonly arise spontaneously, 20–30% are associated with tuberous sclerosis.² Rarely found extrarenally, angiomyolipoma has been reported in liver, mediastinum, colon, uterus, and lung.^{1,3–5}

A 57-year-old man with no history of tuberous sclerosis presented with right flank pain and retroperitoneal bleeding from a 9.7-cm mixed fat and soft tissue mass on the posterior aspect of the right kidney. Other lesions consistent with angiomyolipoma included a smaller mass of the right renal upper pole and a 4.3-cm left renal lesion. In addition, a similar-appearing central pelvic mass was identified at the posterior aspect of the bladder (Fig. 1). Cystoscopy confirmed that this mass did not extend into the bladder. The patient underwent the well-established procedures of embolization of the symptomatic right renal angiomyolipoma, subsequent robot-assisted laparoscopic left partial nephrectomy for the 4.3-cm lesion, and simultaneous resection of the pelvic mass (Fig. 2).^{6,7} Pathologic analysis confirmed angiomyolipoma (Fig. 3). Discovery of mixed fatty with soft tissue pelvic masses should prompt consideration of this entity. The spontaneous bleeding risk is unknown in this setting, but experts generally advocate removal of renal angiomyolipomas exceeding 4 cm.⁸

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Figure 1.

(A) Coronal image showing a large right renal mixed fatty and soft tissue lesion, left renal lesion, and a separate similar-appearing mass in the pelvis. (B) Sagittal image showing a pelvic mass on the posterior aspect of the bladder. Retroperitoneal hemorrhage arising from large right renal angiomyolipoma can also be seen. (C) Axial image of the pelvic mass, measuring 6.7×4.7 cm in diameter and consisting of fat, soft tissue, and blood vessels.

Figure 2.

(A) Laparoscopic photograph of the pelvic mass upon peritoneal entry. The arrow indicates the location of the Foley catheter tip in the bladder, adjacent to the mass. (B) Image of the pelvic mass with peritoneal covering elevated. An easily developed surgical plane is seen between this pelvic angiomyolipoma and the posterior bladder. The right vas deferens is also noted.

Figure 3.

Histology of renal (A, B) and pelvic (C, D) masses. Both tumors are composed of mature adipocytes, thick-walled blood vessels (*arrows*), and myoid spindle cells (*arrowheads*). Note that both renal and pelvic angiomyolipomas exhibit the same histologic features. Original magnification, $\times 100$ (A, C); $\times 400$ (B, D).