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Solitary fibrous tumor in the pelvic space

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Abstract A case of a solitary fibrous tumor (SFT) of the pelvic space in a 64-year-old man is reported herein. Computed tomography (CT) of the pelvis showed a large mass enhanced heterogeneously left paracentral and posterior to the bladder and intimately associated with prostate. The site of origin of the mass could not be defined on CT because margins blended with the bladder, prostate, and rectum. A tumorectomy was performed and has remained well with no evidence of recurrence during the last 3 months. The tumor was 12.5×9.5×8.3 cm in size, solid with a fibromuscular capsule, and gray-tan in color. Histologically, the neoplasms were well circumscribed and composed of short spindle cells arranged without an obvious pattern. Immunohistochemically, these cells were strongly positive for CD 34 and negative for S-100, alpha SMA, and AE1/AE3.

Keywords Solitary fibrous tumor · Pelvic space · CD34

Introduction

Solitary fibrous tumor (SFT) is not as site-restricted as once believed. Initially described as a tumor of the pleura, SFT is now recognized at various extrathoracic sites. SFTs are rare, mesenchymal neoplasm exhibiting variable benign to low-grade or more rarely malignant clinical behavior that are most commonly found in the pleura and, less commonly, on other serosal surfaces. Their cell of origin and etiology are uncertain. A case of solitary fibrous tumor in the pelvic space is presented.

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Case report

A 64-year-old man had been complaining of difficult voiding and constipation for 3 months. Transrectal ultrasonography showed a large pelvic mass adjacent to the prostate. Excretory urography (Fig. 1) showed left ureter and left posterolateral aspect of bladder deformed. Computed tomography (CT) of the pelvis (Fig. 2) showed a large mass enhanced heterogeneously left paracentral and posterior to the bladder and intimately associated with prostate. The site of origin of the mass could not be defined on CT because margins blended with the bladder, prostate, and rectum. Magnetic resonance imaging could not be performed because of his tattoo. Prostate specific antigen was within normal range. Transrectal fine needle aspiration was performed for diagnosis. The diagnosis of SFT was suspected on biopsy. A tumorectomy was performed and has remained well with no evidence of recurrence during the last 3 months. The tumor was 12.5×9.5×8.3 cm in size, solid with a fibromuscular capsule, and gray-tan in color. Histologically, the neoplasms were well circumscribed and composed of short spindle cells arranged without an obvious pattern; focally storiform or fascicular growth patterns with mild to moderate nuclear atypia were seen (Fig. 3). Tumor cells were separated by thick bands of collagen demonstrating foci of keloid-like hyalinization. Prominent vascularity showing a haemangiopericytoma-like vascular pattern and vessels with thick, hyalinized vessel walls was seen in the case. Mitoses were occasionally seen. Immunohistochemically, these cells were strongly positive for CD 34 (Fig. 4) and negative for S-100, alpha SMA, and AE1/AE3. These findings are consistent with a SFT. To our knowledge, this tumor arising from pelvic space is a very rare case.

Discussion

Solitary fibrous tumor (SFT) is a rare spindle cell tumor. In the urogenital sites, the tunica vaginalis testis, kidney, renal capsule, urinary bladder, and prostate have been reported. The present case involved a large mass, which seemed to be attached to the prostatic capsule, filling the pelvis. The tumor was confused with granulomatous prostatitis or carcinoma of prostate because the tumor

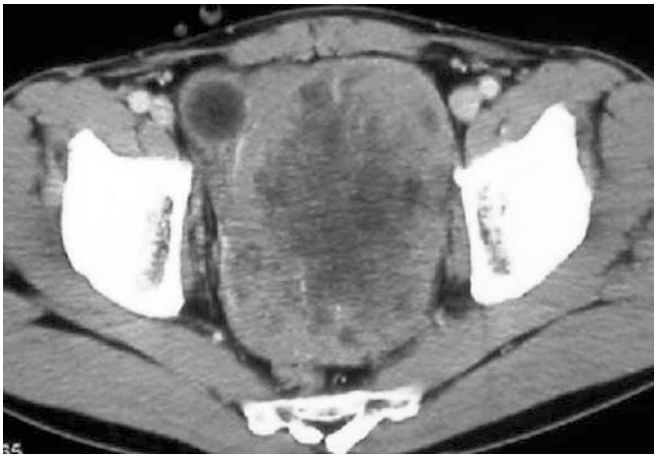

Fig. 1 Excretory urography showed left ureter and bladder deformed

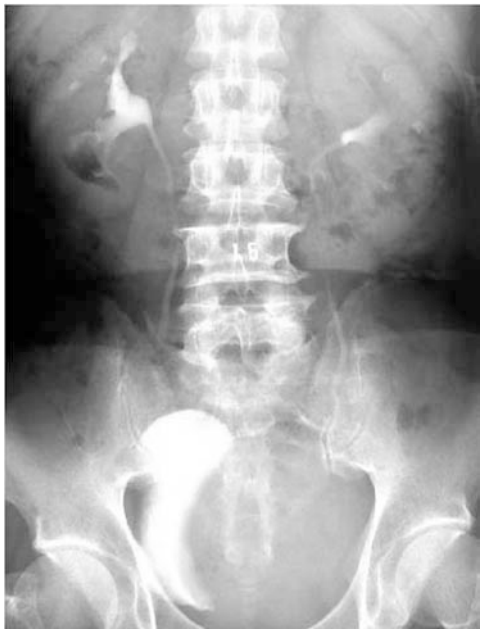

Fig. 2 Contrast-enhanced computed tomography shows 11.0×9.0 cm heterogeneous mass with small necrosis in pelvis pushing bladder toward upper right pelvis

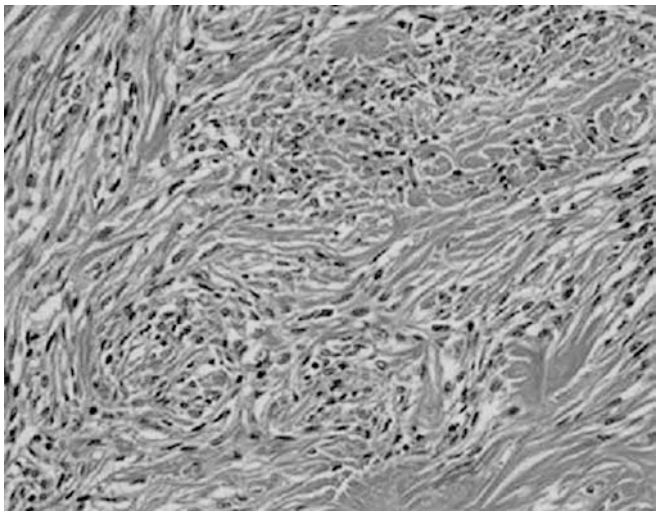

Fig. 3 Microscopic appearance of the tumor. A dense proliferation of spindle or oval cells with mild to moderate nuclear atypia which shows a so-called "patternless pattern" (×20)

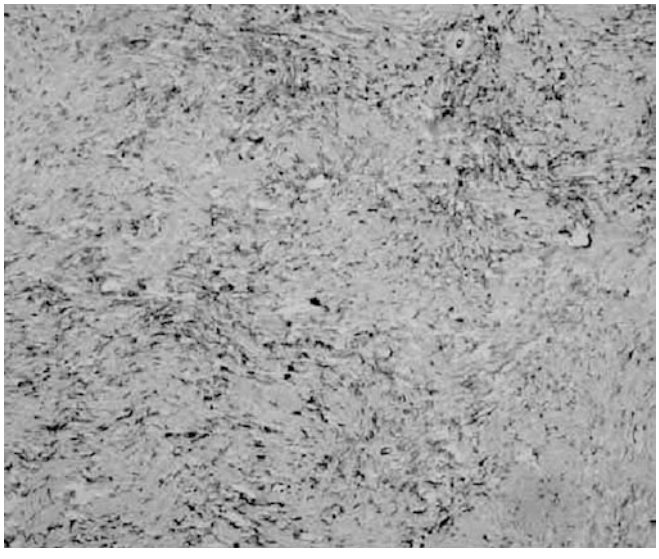

Fig. 4 Low-power magnification of a diffuse CD34 immunostaining of the tumor (×20)

presented with a nodule on rectal examination and appeared as a hypoechoic nodule on transrectal ultrasound. The main problem in the management of this tumor was finding an effective surgical approach that would preserve bladder because it had been diagnosed as SFT.

SFT is characterized histologically by uniform spindle cells that are arranged without an obvious growth pattern [1]. Immunoreactivity for CD 34 is strong and consistent in cells of SFT. CD 34 is a transmembrane glycoprotein expressed on the surface of hematopoietic progenitor cells of lymphoid and myeloid lineage as well as vascular endothelial and dendritic cells and highly specific for SFT [2].

Strict diagnostic criteria are necessary to avoid overdiagnosis or confusion with more aggressive neoplasms in this location.

References

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