

**Leiomyoma of the seminal vesicle**

Dear Editor,

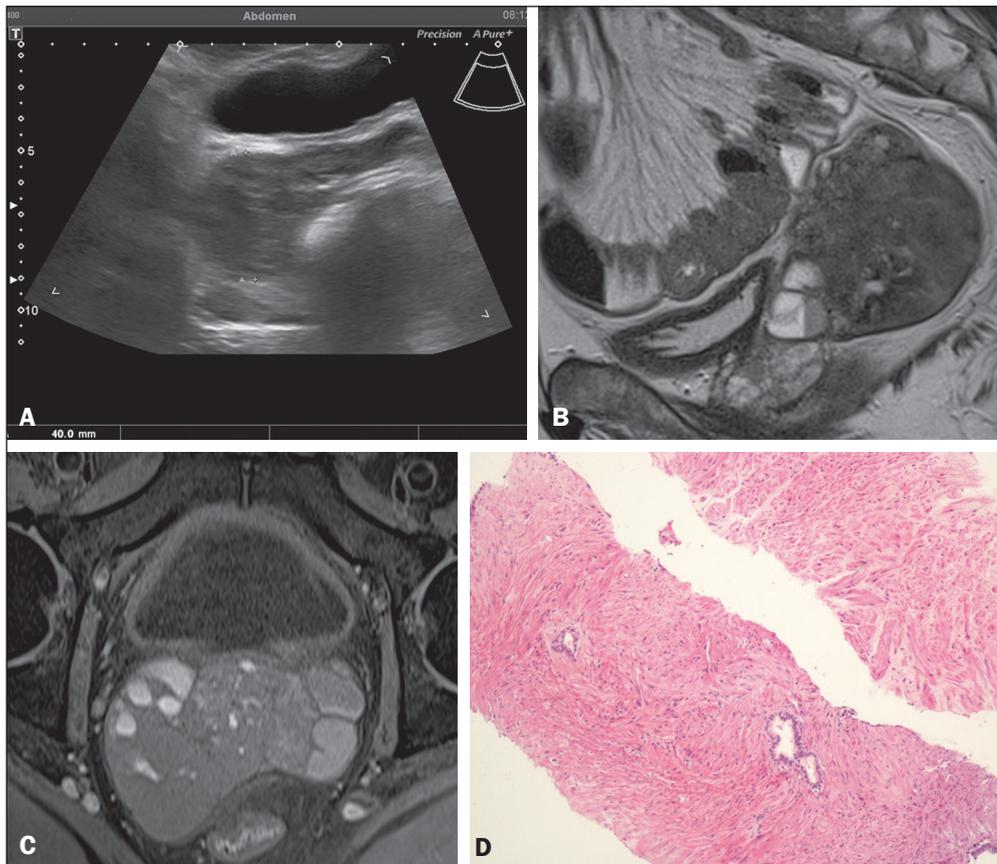
A 60-year-old male patient was admitted to the urology outpatient clinic with an expansile lesion detected by rectal examination. He reported having undergone transurethral resection of the prostate. He described himself as a smoker and an alcoholic. He reported no symptoms of wasting or urinary tract symptoms. Transabdominal pelvic ultrasound showed a heterogeneous prostate with normal contours and of normal weight (Figure 1A). Seminal vesicles were enlarged, resulting in a well-defined, heterogeneous solid lesion. Magnetic resonance imaging (MRI) demonstrated a well-defined, solid-cystic expansile lesion in the right seminal vesicle, with an intermediate signal in a T1-weighted sequence, a hypointense signal in a T2-weighted sequence, and a fluid-fluid level in the sagittal plane. Showing no post-contrast enhancement or restricted diffusion, the lesion extended to the contralateral seminal vesicle and maintained cleavage with the adjacent structures (Figures 1B and 1C). These findings raised the possibility of a benign nodule, maintaining the rationale used for ovarian and renal lesions<sup>(1,2)</sup>. An ultrasound-guided transrectal biopsy was performed, and the histopathological study revealed abundant, benign mature smooth muscle, with scanty bistratified columnar epithelium, consistent with seminal vesicle leiomyoma (Figure 1D). In order to differentiate seminal vesicle leiomyoma from other stromal tumors, such as leiomyosarcoma and mixed epithelial stromal tumor, an immunohistochemical study was performed, which demonstrated a lack of nuclear marker (Ki-67) protein expression, as well as negativity for estrogen, progesterone, and prostate specific antigen receptors.

Genitourinary tumors have recently been reported in the radiology literature of Brazil<sup>(2-7)</sup>. Leiomyoma is a benign smooth muscle tumor found in the uterus and in the gastrointestinal tract. Despite the high incidence of leiomyoma in the female genital tract, it is uncommon in the male genitourinary tract, only a few cases having been reported in the literature<sup>(8)</sup>. Leiomyomas can proliferate in any tissue composed of smooth muscle and separated by any amount of connective tissue. According to some studies, leiomyoma originates from the Wolffian and Müllerian ducts, and the immunohistochemical differentiation remains controversial<sup>(9)</sup>.

Seminal vesicles are extraperitoneal glands of the male reproductive system that secrete fluid containing enzymes<sup>(10)</sup>. The most common changes to seminal vesicles are agenesis and cystic anomalies. Primary seminal vesicle neoplasms, which are extremely rare, include leiomyoma, cystadenoma, angioendothelioma, teratoma, schwannoma, and paraganglioma<sup>(9,10)</sup>. Patients with seminal vesicle leiomyoma are often asymptomatic, although lumbar pain, polyuria, dysuria, perineal pain, and infertility may occur<sup>(11)</sup>.

Epithelial lesions, including secondary neoplasms such as carcinoma of the prostate, bladder, rectum and primary adenocarcinoma, constitute the most common presentation of seminal vesicle leiomyoma. Typical MRI findings include lesions with a hypointense signal in T2-weighted sequences, obliteration of adjacent tissues, and loss of the normal seminal vesicle architecture. The stromal lesions have a solid-cystic composition and variable signal intensity<sup>(12)</sup>.

Extra-adrenal paragangliomas, which are rare neuroendocrine tumors, present as well-defined lesions with a hypointense



**Figure 1. A:** Transabdominal pelvic ultrasound showing a well-defined solid hypoechoic lesion, measuring 4.0 cm, in the right seminal vesicle space. **B:** Histological slide showing abundant, benign mature smooth muscle, with scanty bistratified columnar epithelium. **C:** Sagittal T2-weighted MRI sequence showing a well-defined, heterogeneous expansile lesion with predominantly low signal intensity. Note also the fluid-fluid level. **D:** Axial T1-weighted fast spin-echo MRI sequence showing a solid heterogeneous lesion with its epicenter in the right seminal vesicle and a predominantly isointense signal.

signal in T2-weighted sequences and post-contrast enhancement, some showing heterogeneity with necrotic areas. Schwannomas show a hypointense signal in T2-weighted sequences and intense post-contrast enhancement. In contrast, cystadenomas present as a well-defined, usually unilateral, multilocular cystic mass with a hypointense signal in T2-weighted sequences and discrete enhancement<sup>(9,10,13,14)</sup>.

Solid seminal vesicles lesions are quite rare and have poorly specific imaging characteristics. However, we can rely on the well-established diagnostic parameters of other abdominal solid lesions, such as ovarian and renal tumors, as a line of reasoning for the suspicion of benignity.

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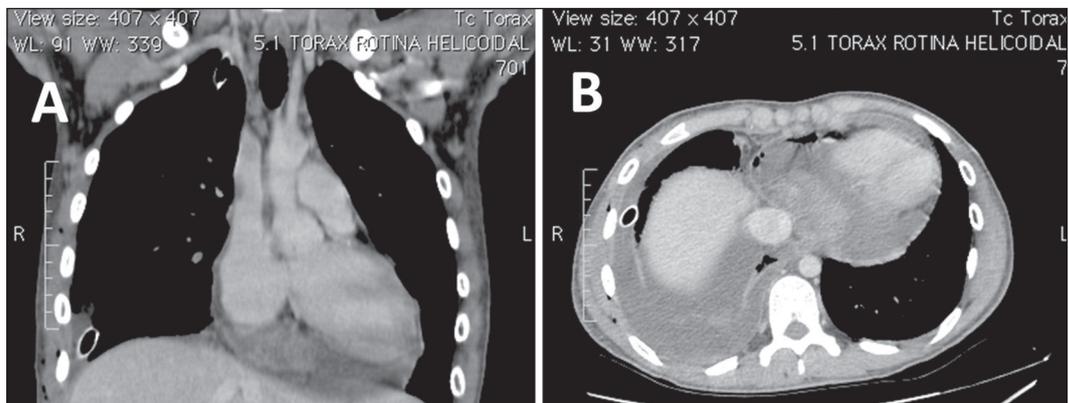
Pericardial synovial sarcoma: radiological findings

Dear Editor,

An 18-year-old male patient was admitted to the hospital with a 15-day history of cough and fatigue. Cardiac auscultation revealed muffled heart sounds. A chest X-ray obtained at admission showed an increase in the cardiac silhouette and moderate pleural effusion on the right. An echocardiogram was performed, which demonstrated a significant pericardial effusion with signs of diastolic restraint and a rounded, hypoechoic mass with regular contours, measuring 3.6 × 3.9 cm, located posterior to the right atrium. The patient underwent pericardiocentesis, with analysis of the fluid collected. Computed tomography (CT) of the chest and cardiac magnetic resonance imaging (MRI) were requested. The chest CT (Figures 1) revealed a solid, heterogeneous mass with contrast enhancement in the posterior portion of the pericardial sac, associated with pericardial effusion and pleural effusion. In the cardiac MRI (Figure 2), a solid mass with a heterogeneous content measuring 3.2 × 6.1 × 3.9 cm was observed in

the posterior portion of the pericardial sac, with adhesion points and significant heterogeneous contrast uptake (as determined by the delayed enhancement technique), as well as pericardial inflammation. Based on the imaging findings suggestive of neoplasia and the inconclusive pericardial fluid cytologic findings, we decided to perform surgical resection of the mass. The histopathological examination of the surgical specimen resulted in a diagnosis of synovial sarcoma. After one month of hospitalization, the patient was discharged to oncology outpatient follow-up.

Cardiac MRI has taken on an ever-increasing role in the study of cardiovascular diseases<sup>(1-4)</sup>. Pericardial synovial sarcoma is a primary malignant tumor of the pericardium that is histologically similar to the synovium and originates from mesenchymal cells<sup>(5)</sup>. It is an extremely rare disease, the exact prevalence of which remains unknown, with a slight predilection for young males<sup>(6)</sup>. The symptoms range from none to pericardial effusion with cardiac tamponade, dyspnea, fever, weight loss, and embolic phenomena<sup>(7)</sup>. Although the prognosis for pericardial synovial sarcoma is poor, some patients may benefit from



**Figure 1.** Contrast-enhanced chest CT. Coronal (A) and axial (B) slices in a mediastinal window, showing a solid heterogeneous mass with contrast enhancement in the posterior portion of the pericardial sac associated with pericardial effusion and pleural effusion on the right, together with pleural drainage.