

Paratesticular Solitary Fibrous Tumor Masquerading as Metastatic Prostate Cancer

Frank C Lin, MD; Roger E Nellans, MD; Dheeraj R Gopireddy, MD; Erika R Bracamonte, MD

CASE SUMMARY

An 84-year-old male with a prior diagnosis of prostate adenocarcinoma (PCa) and increasing prostate-specific antigen (27.9 ng/mL) presented to our clinic. The patient had previously declined treatment for his prostate malignancy and now sought care for an increasingly bothersome scrotal swelling of two years' duration. Physical examination revealed a solid intrascrotal mass superior and distinct to the left testis and otherwise normal genitourinary findings.

IMAGING FINDINGS

Scrotal ultrasound revealed an intrascrotal heterogeneous solid mass, in the left inguinal region adjacent to the left testis, measuring 8.2cm in diameter (Figure 1). Bilateral testes were without abnormality, and demonstrated normal vascular flow. Given

the elevated PSA and finding of a solid left paratesticular mass, there was a clinical suspicion for metastatic prostate cancer. A 99mTc bone scintigraphy was performed and showed no evidence of bony metastatic disease.

Given the patient's significant discomfort and uncertainty of the diagnosis, the patient elected to undergo excision of the mass. Through a left inguinal incision the mass and left testis were delivered. (Figure 2). Upon examination, the mass was distinct and uninvolved with the left testis and cord structures. Therefore, only the mass was excised, sparing the left testis.

Gross evaluation showed a well-circumscribed neoplasm with a homogeneous white-tan cut surface and composed of firm parenchyma. Microscopic evaluation demonstrated a proliferation of bland spindled and

epithelioid cells with moderate amounts of pale eosinophilic cytoplasm and virtually absent mitotic activity. The cells were present without distinct pattern or architectural arrangement, within a highly vascular and collagenous stroma containing prominent hyalinized collagen bands. Immunohistochemistry was diffusely positive for CD34, BCL2, CD99, and negative for CD45, CD31, ERG, calretinin, pan-cytokeratin (OSCAR), desmin, SMA, and D2-40 (Figure 3).

DIAGNOSIS

Solitary fibrous tumor (SFT) in an extrapleural paratesticular location

DISCUSSION

Solitary fibrous tumors are mesenchymal neoplasms with pleural origins; most are benign.¹ Extrapleural SFTs are

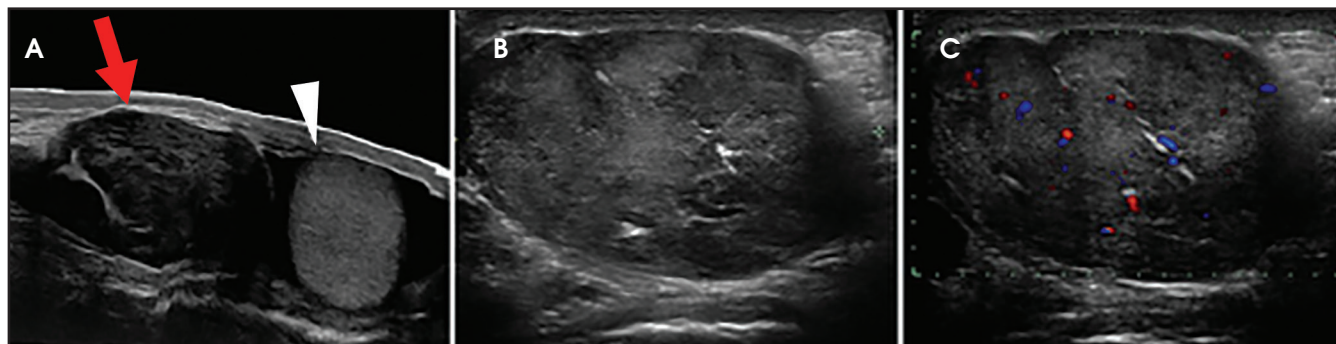


FIGURE 1. Ultrasound images of left hemiscrotum. (A) Composite scrotal ultrasound image demonstrating paratesticular mass (arrow) later diagnosed as SFT and left testis (arrowhead). (B) Scrotal ultrasound image demonstrating heterogeneous echotexture of left paratesticular SFT. (C) Doppler ultrasound image demonstrating internal vascularity of left paratesticular SFT.

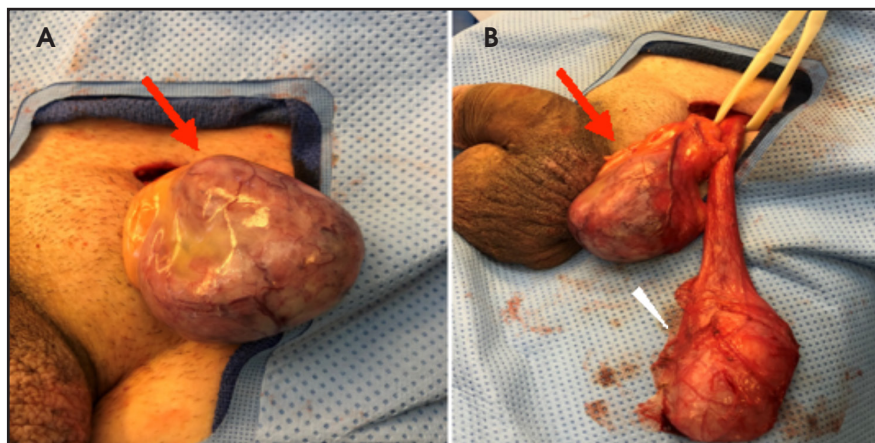


FIGURE 2. Intraoperative photos. (A) Paratesticular SFT (arrow) delivered from left inguinal incision. (B) Paratesticular SFT (arrow) with left testis (arrowhead), both externalized and demonstrating discrete origins and lack of testis involvement.

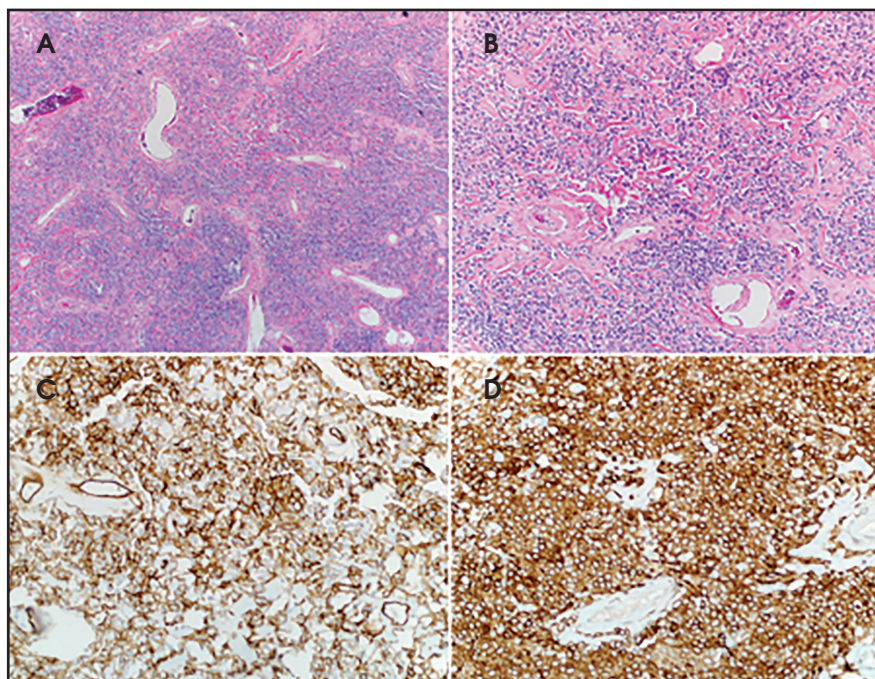


FIGURE 3. Pathology. (A) The neoplasm contains numerous vessels and sheets of cells within a dense collagenous background. H&E 40x magnification. (B) Bland epithelioid tumor cells are present amid prominent thick collagen bundles. No tumor necrosis, atypia or significant mitotic activity was seen. H&E 100x magnification. (C) Tumor cells are diffusely positive for CD34 by immunohistochemistry. 100x magnification. (D) Tumor cells are diffusely positive for Bcl2 by immunohistochemistry. 100x magnification.

observed in adults ranging in age from 20 to 70 years, with a median age of 50 years at diagnosis. They can be found in the subcutaneous tissues, the head and neck, and the meninges, as well as in the orbits, thoracic wall, mediastinum, pericardium, peritoneum, pelvis, adrenal glands, liver,

and urogenital system.² Genitourinary SFTs are very rare and their discovery in the paratesticular location is described in the literature sparingly.³ Zhou, et al, in 2015 described a paratesticular SFT and summarized 7 additional documented examples in the literature.⁴

Although most SFTs are benign, surgical excision remains the gold standard and can be curative; however, continued surveillance is warranted, as recurrences and metastases have been documented.⁵

CONCLUSION

Solitary fibrous tumor is a rare benign spindle cell neoplasm originating from mesenchymal cells typically arising from the pleura.⁶ Extrapleural sites have been described; however, the incidence of genitourinary SFTs is exceedingly low.⁷⁻⁹ We present a case of a paratesticular SFT that masqueraded as metastatic prostate cancer.

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Affiliations: University of California, Los Angeles, CA (Dr Lin), University of Arizona College of Medicine, Tucson, AZ (Drs Nellans, Gopireddy, and Bracamonte). Disclosures: None.