

## Leiomyoma of the seminal vesicle: a rare case

Aftab S. Shaikh, Girish D. Bakhshi,  
Arshad S. Khan, Nilofar M. Jamadar,  
Aravind Kotresh Nirmala,  
Arif Ahmed Raza

Departments of Surgery and Radiology,  
Grant Medical College & Sir JJ Group  
of Hospitals, Mumbai, India

### Abstract

Leiomyomas though common benign tumors of smooth muscle cells are extremely rare in the male genitourinary tract. We present a case of an elderly male who presented with complaints suggestive of urinary bladder outlet obstruction since 1 year. His evaluation showed it due to a tumour arising from the left seminal vesicle. Excision of the tumor was done which was diagnosed on histopathology as leiomyoma. A brief case report and review of literature is being presented.

### Introduction

Leiomyomas are common smooth muscle cell tumors. They are usually benign. Risk of malignant change is low less than 0-10% in various studies.<sup>1,2</sup> Commonly located in gastrointestinal tract and genitourinary tract, they present with symptoms and clinical features as per the size and location of the tumor. Leiomyoma of the seminal vesicles are rare and usually the symptoms include those of bladder outlet obstruction such as hesitancy, straining at micturition and terminal dribbling.<sup>3</sup> We present a case of seminal vesicle leiomyoma in a 78-year old male. Patient was admitted for symptoms of bladder outlet obstruction and underwent excision of the tumor.

### Case Report

A 78-year old male presented with gradually increasing symptoms of straining at micturition, increased frequency, hesitancy and terminal dribbling. No history of hematuria, or significant loss of weight, or low back ache. General examination was within normal limits. Abdominal examination was unremarkable. On per rectal examination, a soft swelling was palpable anteriorly with slight mobility below prostate.

Blood examinations were within normal limits and serum prostate specific antigen was not raised. Ultrasonography suggested a lump in the pelvis with close adherence to the base of the bladder. Computed tomography (CT) of abdomen and pelvis suggested a soft tissue swelling in the pelvis measuring 4.7×4.3×3 cm with connection to the left seminal vesicle (Figure 1). Ultrasound guided trans-rectal needle biopsy of the tumor was done. Histological evaluation showed spindle cell tumor. Surgical excision was done through a suprapubic approach. Intra-operatively the tumor was found arising from the lateral margin of left seminal vesicle with no adhesions to surrounding organs rectum, urinary bladder and prostate (Figure 2). The tumor was excised leaving the seminal vesicle intact (Figure 3). Post operative period was uneventful with near complete relief of symptoms. Histopathology report confirmed the tumor to be a leiomyoma (Figure 4). Follow up of six months has shown him to be disease and symptom free.

### Discussion

Leiomyomas are benign smooth muscle cell tumors of monoclonal origin mainly composed of smooth muscle cells separated by variable amount of fibrous connective tissue. Majority are benign with a very low incidence of malignant conversion. In the uterus, leiomyomas are most common tumors.<sup>4</sup> Leiomyomas can also occur in small bowel, esophagus and stomach. Symptoms correspond to the site and volume of the leiomyoma and are mostly due to pressure on the surrounding organs or luminal compromise. There is a rare risk of hemorrhage when the tumor outgrows its own blood supply.

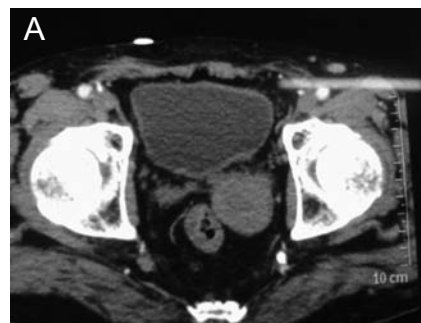


Figure 1. A) Computed tomography (CT) scan of revealing a retrovesical soft tissue tumor communicating with the left seminal vesicle and free from the rectal wall. B) CT showing a soft tissue tumor arising from left seminal vesicle.

Correspondence: Aftab S. Shaikh, 5/4, Panchsheel, Sir J J Hospital campus, Byculla (East), Mumbai-400008, Maharashtra, India. Tel. +91.9702129955. E-mail: docaftabs@gmail.com

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The incidence of leiomyomas in the male and female urinary tract is a bit rare and can occur in ureters, urinary bladder and urethra. Leiomyomas are the most common benign tumors of the urinary bladder.<sup>5</sup> Leiomyomas may occur in intravesical (51.1%), intramural (30%), and extravesical (16.7%) locations in the bladder.<sup>6</sup> The site and dimensions of the

tumor determine the symptoms, surgical approach, and prognosis. Common symptoms (occurring in 15-20% of cases) are related to voiding; they include dysuria, frequency or hesitancy in urination, dribbling, and hematuria. Pedunculated intraluminal masses may lead to outflow obstruction.<sup>7</sup>

In females urethral leiomyomas primarily occur in women of reproductive age, enlarge during pregnancy, and regress post partum, characteristics that are indicative of their hormonal dependency.<sup>8</sup> They can occur in males and postmenopausal women.<sup>9</sup> Depending on the tumor size, clinical manifestations range from none to bladder outlet obstruction (referred to by some authors as *female pseudo-prostate*).<sup>10</sup> The most frequent clinical symptom is difficulty in micturition with urinary tract infections (64%), followed by dyspareu-

nia and hematuria (28%).<sup>11</sup> The tumor may manifest as a mass that protrudes into or through the urethra. Unlike the female counterpart, the incidence of leiomyomas in the male genital tract is rare. Leiomyoma of the seminal vesicles have a very low incidence. Symptoms include that of rectal tenesmus, bladder outlet obstruction, blockage of seminal vesicle, hematospermia. The differential diagnosis of benign tumors of seminal vesicles includes cyst, fibroadenoma, neuroma and angioendothelioma, mesenchymal and fibromuscular dysplasia. Malignant transformation (leiomyosarcoma) within a leiomyoma is extremely rare. Diagnostic tools include ultrasonography, CT, magnetic resonance imaging (MRI) studies, imaging guided transrectal needle biopsies.<sup>12</sup> On ultrasonographic evaluation they appear as heterogenous and predominantly hypoechoic lesions. On MRI leiomyomas show low intensity on T2.<sup>13</sup> In present case CT scan was helpful. On histopathological examination, its cut surface appears as firm, grey-white, and whorled or raw-silk appearance. Microscopy shows fascicular pattern of smooth muscle bundles separated by well vascularised connective tissue. Smooth muscle cells are elongated with eosinophilic or occasional fibrillar cytoplasm and distinct cell membranes.<sup>14</sup> Present case was diagnosed on transrectal biopsy.

Advocated modes of therapy include feeding artery embolization, cryosurgery and excision. The most definitive mode of treatment is the surgical excision of the tumor. Surgical excision can be carried out by either open or laparoscopic approach. With advances in technology, laparoscopic excision is gaining an upper hand even for large tumors. Our patient underwent surgical excision and the relief of symptoms was immediate in postoperative period. Recurrence rate of seminal vesicle leiomyoma has not yet been established.

## References

1. Gentile AT, Moselay HS, Quinn SF, et al. Leiomyoma of seminal vesicle. J Urol 1994;151:102709.
2. McFarland J. Malignant myoma. Am J Cancer 1935;25:530.
3. Ahmadzadeh M, Bosse M. Leiomyoma of seminal vesicle. Urol Int 1996;57:252-4.
4. Blaustein A, Kurman RJ, eds. Blaustein's pathology of the female genital tract. 5 th ed. Berlin: Springer-Verlag; 2002.
5. Binsaleh S, Corcos J, Elhilali MM, Carrier S. Bladder leiomyoma: report of two cases and literature review. Can J Urol 2004;11: 2411-13.
6. Silva-Ramos M, Massó P, Versos R, Soares J, Pimenta A. Leiomyoma of the bladder: analysis of a collection of 90 cases. Actas Urol Esp 2003;27:581-6. [In Spanish].
7. Kabalin JN, Friehe FS, Niebel JD. Leiomyoma of bladder: report of 2 cases and demonstration of ultrasonic appearance. Urology 1990;35:210-12.
8. Ozel B, Ballard C. Urethral and paraurethral leiomyomas in the female patient. Int Urogynecol J Pelvic Floor Dysfunct 2006;17: 93-5.
9. Saad AG, Kaouk JH, Kaspar HG, Khauli RB. Leiomyoma of the urethra: report of 3 cases of a rare entity. Int J Surg Pathol 2003;11:123-6.
10. Cornella JL, Larson TR, Lee RA, et al. Leiomyoma of the female urethra and bladder: report of 23 patients and review of the literature. Am J Obstet Gynecol 1997;176:1278-85.
11. Lee MC, Lee SD, Kuo HT, Huang TW. Obstructive leiomyoma of the female urethra: report of a case. J Urol 1995;153:420-1.
12. Lallemand B, Busard P, Leduc F, Vaesen R. Laparoscopic resection of a leiomyoma of the seminal vesicle. Indian J Urol 2007;23:70-1.
13. Dahms SE, Hohenfellner M, Linn JF, et al. Retrovesical mass in men: pitfalls of differential diagnosis. J Urol 1999;161:1244-8.
14. Rao, ed. Textbook of gynecology - section IX: Gynaecological neoplasms. Amsterdam: Elsevier; 2008.



Figure 2. Intraoperative finding showing the tumor arising near left seminal vesicle.



Figure 3. Excised tumor in whole and in cut section surface appears as firm, grey-white, and whorled/raw-silk appearance.

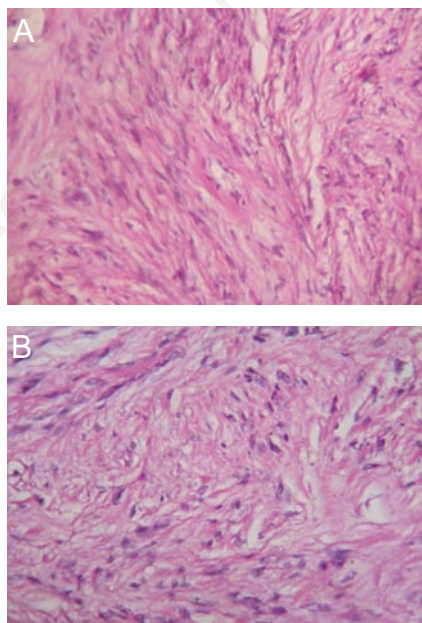


Figure 4. A) Hematoxylin and eosin stain (10x): histopathological examination, non-striated muscle fibers are arranged in bundles of various sizes that run in multiple directions. B) Hematoxylin and eosin stain (40x): individual cells are spindle shaped, have elongated nuclei, and are uniform in size, varying amounts of connective tissue are intermixed with the smooth muscle bundles.