

## Solitary fibrous tumor of urinary bladder in a female patient and transurethral enucleation of tumor

Kadın hastada mesanesinin soliter fibröz tümörü ve transüretal enükleasyonu

Ali Akkoc<sup>1\*</sup>, Nilgun Sogutcu<sup>2</sup>, Murat Ucar<sup>1</sup>

1. Alanya Alaaddin Keykubat University, Faculty of Medicine, Department of Urology, Alanya, Turkey

2. Gazi Yasargil Education and Research Hospital, Pathology Clinic, Diyarbakir, Turkey

### ABSTRACT

Solitary fibrous tumors are rare neoplasms, initially defined in visceral pleura. Recently, they have been noticed to have ubiquitous distribution of human body. Solitary fibrous tumor of bladder is extremely rare especially in the females. We are presenting a bladder solitary fibrous tumor case of 62-years-old female patient who underwent transurethral enucleation instead of conventional transurethral resection of bladder tumor. According to our research, this is the fourth case of solitary fibrous tumor in a female urinary bladder in the literature.

Keywords: Bladder, solitary, fibrous, tumor, transurethral, enucleation.

### ÖZ

Soliter fibröz tümörler ilk önce visseral plevrada tanımlanmış nadir görülen tümörlerdir. Yakın zamanda vücutta yaygın dağılımı olduğu saptanmıştır. Mesane soliter fibröz tümörleri özellikle kadınlarda son derece nadirdir. Burada konvansiyonel transüretal rezeksiyon yerine, transüretal enükleasyon uyguladığımız 62 yaşında bayan hastadaki mesanesinin soliter fibröz tümörü olgusunu sunuyoruz. Yaptığımız araştırmaya göre, bu olgu literatürde kadın hastada görülen dördüncü mesane soliter fibröz tümör olgusudur.

Anahtar Kelimeler: Mesane, soliter, fibröz, tümör, transüretal, enükleasyon

Geliş Tarihi: 29.09.2017 / Kabul Tarihi: 24.01.2018 / Yayınlanma Tarihi: 12.03.2018

\*Corresponding Author: Ali Akkoç, Alanya Alaaddin Keykubat Üniversitesi Tıp Fakültesi Üroloji A.D. Alanya, Türkiye. Tel: +905072394722, mail: ali.akkoc@alanya.edu.tr

**S**olitary fibrous tumor (SFT) is a rare neoplasm of mesenchymal origin, initially described in visceral pleura and usually presenting benign behavior [1,2]. Current beliefs, they do not derive from mesothelium, but rather from dendritic interstitial cells, which express CD34 and have generalized distribution in tissues, a feature that helps to recognize it in other organs [3].

The urogenital tract SFT is very rare. As far as we know this is the fourth reported case in a urinary bladder of a female patient. We performed transurethral enucleation technique instead of routine transurethral resection of that bladder tumor.

### CASE REPORT

During a routine abdominal ultrasound examination, a bulging of bladder floor was detected in an asymptomatic 62-year-old woman. The patient's medical history was unremarkable. Magnetic resonance imaging (MRI) confirmed the presence of this noninfiltrative solid mass, between the rectum and the bladder with a thin capsula in the pelvis measuring 3x2 cm (Figure 1). The patient underwent rigid cystoscopy and the epithelial lining of the bladder covering the mass lesion appeared normal. It demonstrated about 3 cm bladder mass that was not originated from bladder mucosa. We performed transurethral enucleation of the mass using a transurethral resectoscope and took resectional biopsy from the floor of the tumor (Figure 2). Pathology showed mass to be solitary fibrous tumor of bladder (uniform spindle cells in collagenous stroma, encapsulated, no mitotic activity, no necrosis). Surgical margin was negative for tumor. The immunohistochemical analysis showed positivity of tumor cells to CD34, CD99, BCL2, STAT6, negative to S100, CD10, CD31, CD117, ALK, EMA, PAN CK and Ki-67 stains 1-2% of nuclei. Staining pattern confirmed solitary fibrous tumor (Figure 3).

### DISCUSSION

SFT is a rare mesenchymal neoplasm that accounts for less than 2% of all soft-tissue tumors usually involving the three membrane (peritoneum, pleura, pericardium). Previously, SFT was described as "benign fibrous mesothelioma" of the pleural cavity and it was incorrectly thought to be merely confined to the serosal surfaces, due to an assumed mesothelial origin [4]. It is now well established that SFTs are ubiquitous neoplasms with most organs and tissues such as gastrointestinal tract, liver, peritoneum, orbit, meninges, paranasal

sinuses, respiratory tract, pericardium, mediastinum, thyroid, sublingual gland, adrenal gland, kidney, male genital system, female genital system, spinal cord, periosteum, skin and soft tissue.

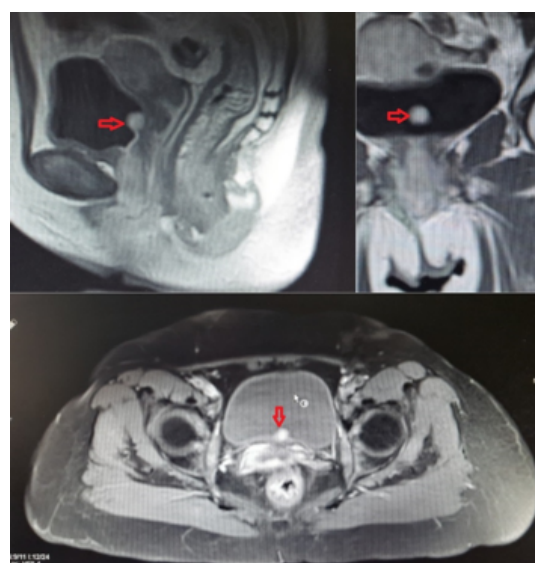


Figure 1. Magnetic resonance images of the solitary fibrous tumor of urinary bladder.

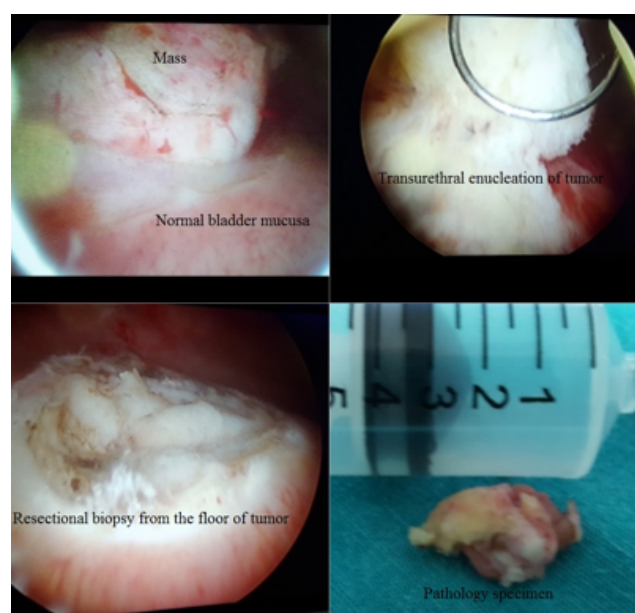


Figure 2. Intraoperative and postoperative images of the tumor.

SFT is a benign neoplasia, whose behavior depends on its volume and location, and it occurs equally in both sexes and the age of presentation varies from the second to sixth decade. Bladder SFT affects preferentially men, with mean age around fifties [5,6]. 10% to 20% of SFTs may show aggressive behavior. Malignancy criteries include increased cellularity and mitotic activity, necrosis, hemorrhage and pleomorphism [7]. Aggressivity factors include positive surgical margin,

tumor size greater than 10cm, and poor histology [1]. There is no any malignancy criteries and aggressivity factors in our case.

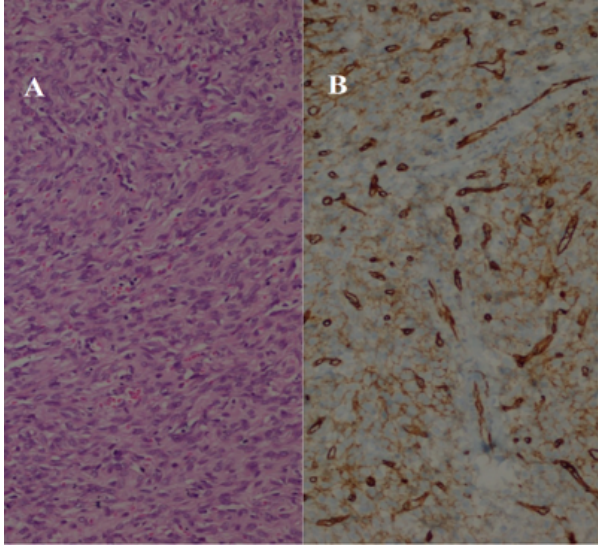


Figure 3. A-) Hematoxylin and eosin stained protocol shows plump spindled cells. (x200) , B-) Immunohistochemistry of CD 34 (x200)

In a review of 22 cases of urinary bladder SFT, 36% of the patients had voiding difficulty, 32% had hematuria, 18% had incidental imaging finding, and 14% presented with lower abdominal discomfort and [6]. Fewer than 5% of SFT presents with paraneoplastic syndromes such as hypoglycemia [7]. Our patient had no symptom.

An immunohistochemical examination is necessary for diagnosis. Immunohistochemistry demonstrates positivity to CD34, CD99, Bcl-2, vimentin. Cytokeratin AE1/AE3, S100, CD31 are usually negative [7]. Recent studies have demonstrated that STAT6 is positive in up to 100% of SFTs [8]. Therefore, STAT6 is very important and sensitive marker for SFT. These parameters are correlated with our case.

In conclusion, most bladder SFTs have slow-growing nature and favorable prognosis. The treatment is complete resection or enucleation of tumor with negative margins. We advise urologists and pathologists to consider the diagnosis of SFT when specimens have spindle cell neoplasia.

**Declaration of conflicting interests:** The authors declared no conflicts of interest for the authorship and/or publication of this article.

**Funding:** The authors received no financial support for the research and/or authorship of this article.

#### REFERENCES

1. Gold JS, Antonescu CR, Hajdu C, Ferrone CR, Hussain M, Lewis JJ, et al. Clinicopathologic correlates of solitary fibrous tumors. *Cancer*. 2002;94(4):1057-68.
2. England DM, Hochholzer L, McCarthy MJ. Localized benign and malignant fibrous tumors of the pleura. A clinicopathologic review of 223 cases. *Am J Surg Pathol*. 1989;13(8):640-58.
3. Van de Rijn M, Hendrickson MR, Rouse RV. CD34: a review. *Appl Immunohistochem*. 1994;21:71-80.
4. Jo VY, Fletcher CD. WHO classification of soft tissue tumours: an update based on the 2013 (4th) edition. *Pathology*. 2014;46(2):95-104.
5. Leite KR, Srougi M, Miotto A, Camara-Lopes LH. Solitary fibrous tumor in bladder wall. *Int Braz J Urol*. 2004;30(5):406-9.
6. Tanaka EY, Buonfiglio VB, Manzano JP, Filippi RZ, Sadi MV. Two Cases of Solitary Fibrous Tumor Involving Urinary Bladder and a Review of the Literature. *Case Rep Urol*. 2016(2016):Article ID:5145789.
7. López Martín L, Calahorra Fernández FJ. Solitary fibrous tumor of the bladder. *Actas Urol Esp*. 2010;34(2):206-8.
8. Yoshida A, Tsuta K, Ohno M, Yoshida M, Narita Y, Kawai A, et al. STAT6 immunohistochemistry is helpful in the diagnosis of solitary fibrous tumors. *Am J Surg Pathol*. 2014;38(4):552-9.

**How to cite this article/Bu makaleye atf için:**  
 Akkoc A, Sogutcu N, Ucar M. Solitary fibrous tumor of urinary bladder in a female patient and transurethral enucleation of tumor. *Acta Med. Alanya* 2018;2(1):46-48.  
 DOI: 10.30565/medalanya.340693