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CASE REPORT

Lipoma in the Bladder Mucosa with MRI Supported: Case Report

Ahmet Turhan [1], Tolga Açıkal [1], Erdem Akbay [1], Yasemin Yuyucu Karabulut [2], Damla Melemezoğlu [2], F. Demir Apaydın [3]

[1] Department of Urology, Mersin University, School of Medicine, Mersin, Türkiye
[2] Department of Patology, Mersin University, School of Medicine, Mersin, Türkiye
[3] Department of Radiology, Mersin University, School of Medicine, Mersin, Türkiye

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Corresponding Author;
Ahmet Turhan, MD
Address: Department of Urology, Mersin University, School of Medicine, Mersin, Türkiye
E-mail: drturhanahmet@gmail.com

ORCID
A.T. 0009-0008-4933-0808
T.A. 0000-0002-2992-1263
E.K. 0000-0001-7669-414X
Y.Y.K. 0000-0001-6619-6868
D.M. 0000-0002-3258-6929
F.D.A. 0000-0001-7023-4521

Abstract

Lipomas are typically encapsulated benign tumors found in the skin, central nervous system, or gastrointestinal system. Lipomas of the bladder wall are rare tumors with limited reported cases. We present a case of a 62-year-old male patient who presented to our outpatient clinic with complaints of hematospermia. During two pelvic magnetic resonance imaging (MRI) scans conducted ten months apart and a diagnostic cystourethroscopy, a 7 mm lesion was incidentally found on the dome of the bladder and was resected for further examination. Follow-up MRI revealed that the size of the lesion remained unchanged. In spite of their rarity, bladder wall lipomas should be considered in the differential diagnosis of bladder tumors.

Keywords: bladder lipoma, hematospermia, tumor

INTRODUCTION

Lipomas are adipose tissue-based benign neoplasms. According to histopathology, they are divided into visceral and conventional lipomas. Conventional lipomas are primarily superficial tissues containing well-encapsulated mature adipose tissue. Lipomas are usually asymptomatic, slow-growing, nontender, round masses with soft consistency. Deep visceral lipomas may cause a variety of symptoms depending of their site and size. The lesion can show endophytic or exophytic, and sessile or pedunculated growth. All tumors had a yellowish color.

Although much less common, visceral lipomas have the same histopathological features (1). The most frequent benign mesenchymal tumor in the urinary bladder is leiomyoma. Bladder lipomas are rare tumors (2). There are fewer than 20 reported cases of lipomas originating from the bladder wall in the worldwide literature, making them rare (3). We presented a 62-year-old male patient who came to our outpatient clinic with a complaint of hematospermia, during the follow-up of a lesion was incidentally found in the bladder.

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CASE REPORT

A 62-year-old male patient presented to our clinic with intermittent hematospermia recurring every 2-3 months. The patient also complained of nocturia, post-micturition residual urine sensation, and intermittent urination. His IPSS score was 19. The patient was on regular tamsulosin and dutasteride therapy. Prostate volume was 45 cc on ultrasound, and digital rectal examination of the prostate was benign with no palpable nodules. The patient had no history of smoking or alcohol use, no anticoagulant or antiplatelet medication use, and no other comorbidities. The only past surgical history was a right orchiectomy performed in 2003, which resulted in benign pathology. The patient's body mass index was 23.5 kg/m2. Total PSA 1.09 ng/mL. Laboratory tests and urine analysis were within normal limits and no hypercholesterolemia. Taking into consideration the patient's age, pelvic MRI was performed to evaluate potential tumor pathologies in the prostate and seminal vesicles. On pelvic MRI, a nodular lesion 7 mm in size was detected incidentally, within the bladder wall at the dome of the bladder. The lesion was homogenously hyperintense on T2 weighted image (Figure 1a), hypointense on fat saturated T1 and T2 weighted sequences with no prominent contrast enhancement. No obvious focal lesions were identified in the prostate and seminal vesicles. Radiologic diagnosis is suspicious for intramuscular lipomatous lesion. The patient had another pelvic MRI that was performed 10 months before. The lesion was same in size and signal intensity in retrospective evaluation (Figure 1b). Cystourethroscopy was performed, revealing a well-defined, yellow-colored, benign-looking lesion measuring 7 mm on the dome of the bladder (Figure 2a). No additional pathology was observed. For further investigation, it was completely resected (Figure 2b). following hemostasis, and a three-way Foley catheter was placed. No additional pathology was observed in the postoperative period. The catheter was removed on the first day after surgery, and the patient was discharged. During the 6-month follow-up period, the patient was observed to be asymptomatic regarding the lesion excised from the bladder. No other hematospermia was observed. Lower urinary tract symptoms remained the same and the IPSS score did not change. The specimen was examined by an experienced pathologist, and a diagnosis of lipoma was made. Microscopically; it showed a well-confined, oval, large nodule of mature adipose tissue surrounded by a fine fibrous capsule in limited areas in the TUR material, with a maximum diameter of 0.7 cm, located in the lamina propria of the mucous layer without any evidence of malignancy or bladder wall invasion. The lesion was covered with a thin urothelial mucosal margin. Findings consistent with mucosal lipoma were identified based on clinical and cystoscopic data (Figure 3a and 3b).

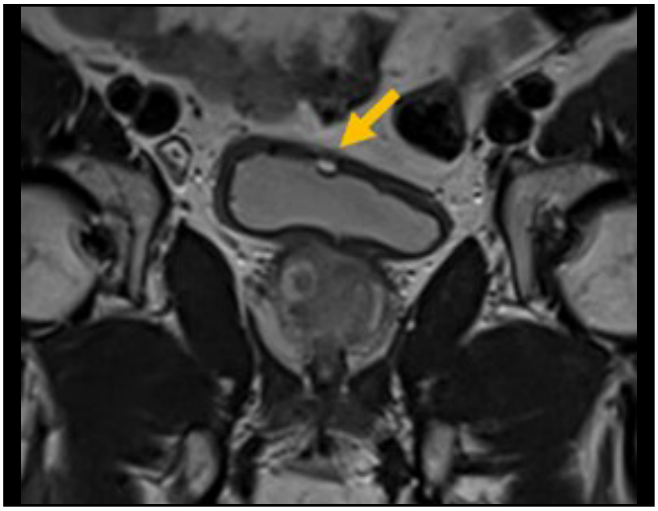

Figure 1a. On coronal T2 weighted image, a small hyperintense lesion is seen within the bladder wall (yellow arrow)

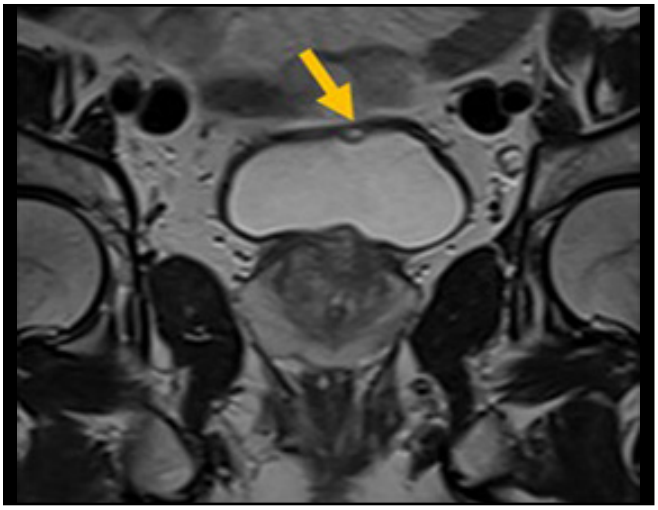

Figure 1b. The lesion was same in size and signal intensity on pelvic MRI that was performed 10 months before (yellow arrow).

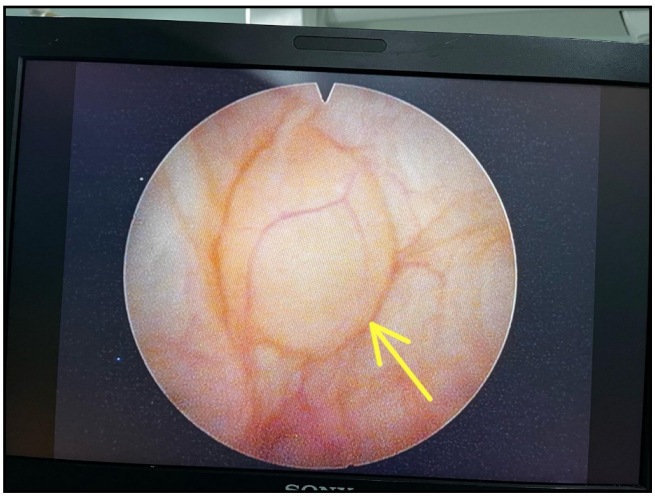

Figure 2a: Lipoma on the dome of the bladder before resection.

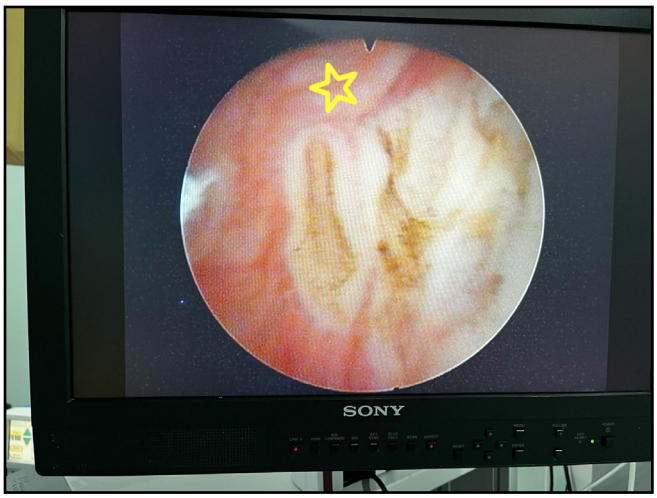

Figure 2b: Post-resection view.

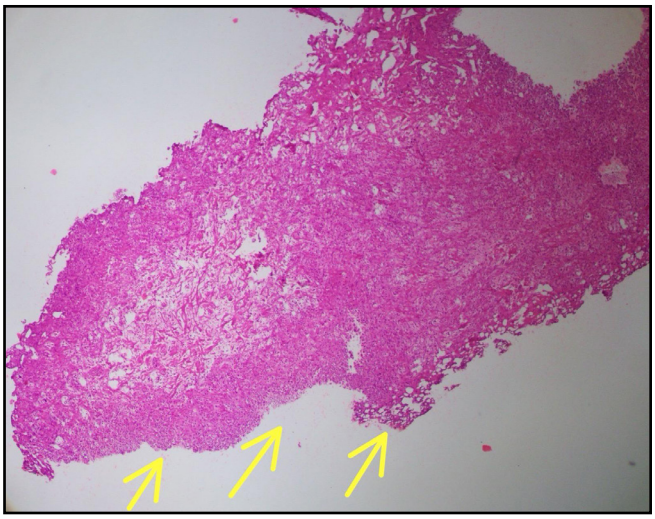

Figure 3a: Histological image of lipoma with urothelial epithelium and lipocytes at x40 magnification with H&E staining.

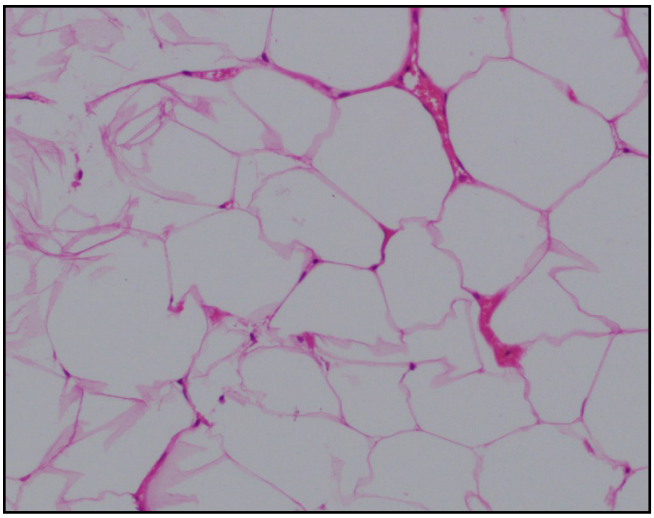

Figure 3b: Image of lipocytes at x200 magnification with H&E staining

DISCUSSION

Benign tumors encapsulated in lipomas usually originate from the skin, central nervous system, or gastrointestinal tract. In the community, these are typical lesions. Although they can occur at any age, lipomas typically affect people between the ages of 40 and 60. Obese patients with diabetes mellitus or hypercholesterolemia, as well as those in families, have a notably elevated incidence of lipomas (4). Lipomas are adipose tissue-based benign neoplasms. According to histopathology, they are divided into visceral and conventional lipomas. Conventional lipomas are primarily superficial tissues containing well-encapsulated mature adipose tissue. Although much less common, visceral lipomas have the same histopathological features (1).

95 percent of bladder tumors had epithelium as their primary source and were frequently malignant. Mesenchymal tumors account for 5% of cases. The most prevalent of these, making up 35% of cases, are leiomyomas (5). There are fewer than 20 reported cases of lipomas originating from the bladder wall in the worldwide literature, making them rare (3). The most common symptom is hematuria in bladder lipoma(6). In our

case, it was detected accidentally during the examinations performed for hematospermia. The bleeding may be attributed to the stretching of the mucosa over the lipoma. Additionally, bladder wall lipomas can cause pollakiuria, nocturia, and urinary tract infections(7). Bladder lipomas described in the international literature are typically smaller than 2 cm and endophytic. Rarely, they can be exophytic, which may present as a retroperitoneal mass(8). Lipomas can occur anywhere in the bladder, but in our case, it was located on the dome of the bladder. Bladder lipomas share common histopathological features with other tissue lipomas. Microscopically, lipomas are well-circumscribed neoplasms consisting of mature adipose tissue without atypia (1). Lipomas are benign tumors, and malignant transformation has not been reported in the literature. CT and MRI are useful in diagnosis (9). Our case not only supports the use of MRI but also represents the first report in the literature demonstrating that the lesion's size did not increase during MRI follow-up.

CONCLUSION

The clinical presentation in our case is not specific due to the patient's reason for referral to a urologist, the absence of comorbidities, and the low body mass index. Therefore, it differs from other bladder lipomas found in the literature. To confirm the diagnosis and provide necessary treatment after the episode of gross hematuria, cystoscopy is necessary to evaluate the bladder for urothelial tumors.

Conflict of Interest: The author declares that they have no conflicts of interest.

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Consent of Informed: Written informed consent was obtained from the patients for publication of these reports and accompanying images.

Authors' Contributions: YYK and DM, as pathologists, identified the pathological findings. FDA contributed to the identification of radiological findings. TA, AT, and EA made significant contributions to the writing of the case report. All authors read and approved the final manuscript.

Inform of Publication: The results of the study were not published in full or in part in the form of an abstract.

Compliance with ethical standards: This article does not contain any studies with human participants or animals performed by any of the authors.

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