

Case report

## Endourological Management of Bladder Mass following Herniorrhaphy

Feraidoon Khayyamfar<sup>1</sup>, Amir Ghasemlouei<sup>2\*</sup>

<sup>1</sup>*Urology Department, Shahed University of Medical Sciences, Tehran, Iran*

<sup>2</sup>*Imam Khomeini Hospital, Tehran University of Medical Sciences, Tehran, Iran*

### HIGHLIGHTS

- Bladder mass arising from a reaction to silk material is used to manage missed bladder hernia repair.
- By TUR, silk suture materials were removed and inflammatory granuloma was treated.

### ARTICLE INFO

Receive Date: 23 November 2021

Accept Date: 14 June 2022

Available online: 15 November 2023

DOI: 10.22034/TRU.2022.316632.1089

#### \*Corresponding Author:

Amir Ghasemlouei

Email: [ghasemloeamir@yahoo.com](mailto:ghasemloeamir@yahoo.com)

Address: Imam Khomeini Hospital, Tehran, Iran.

### Introduction

A prevesicula granuloma formation after inguinal herniorrhaphy is an unusual complication due to infection and reaction to silk suture material, sometimes resembling giant vesicular granulomas masquerading as bladder tumors (1, 2). Irritable symptoms predominate the symptom complex and accurate diagnosis is usually obtained after surgery, leading to complete resolution of symptoms (3, 4). Suture granuloma should be considered in patients who have undergone previous inguinal surgery, mainly when using non-absorbable suture material (5). These patients may have a gun under hernia repair for several months to 11 years before presenting urinary symptoms (6, 7). These patients are usually treated by En bloc excision and partial cystectomy (8, 9). However, in

### ABSTRACT

#### Introduction

In this article, we reported bladder mass arising from a reaction to silk material used to manage missed bladder hernia repair.

#### Case presentation

The patient was a 47-year-old man presenting with urinary symptoms. CT scan identified a 6-cm heterogeneous appearance mass on the right side of the bladder dome; initial Biopsy revealed no malignancy. The patient underwent deep transurethral resection (TUR), following which silk suture materials were removed by endourologic management. Histopathologically the tumor represented inflammatory granuloma. The patient had significant improvement and gradual resolution of the residual mass at 6-month and one-year follow-ups.

#### Conclusions

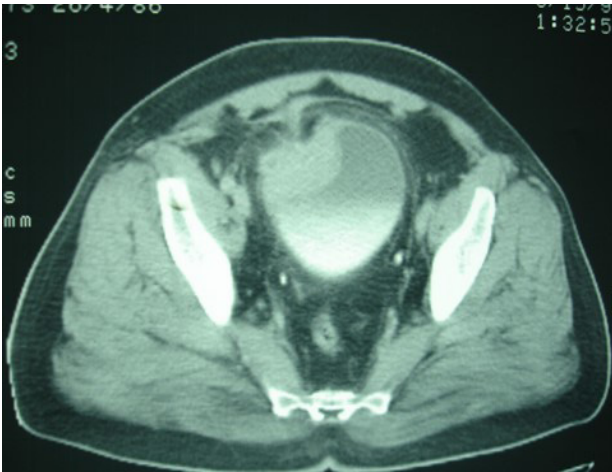
By TUR, silk suture materials were removed and inflammatory granuloma was treated.

**Keywords:** Prevesicula Suture Granuloma; Silk; Hernia; Endourologic

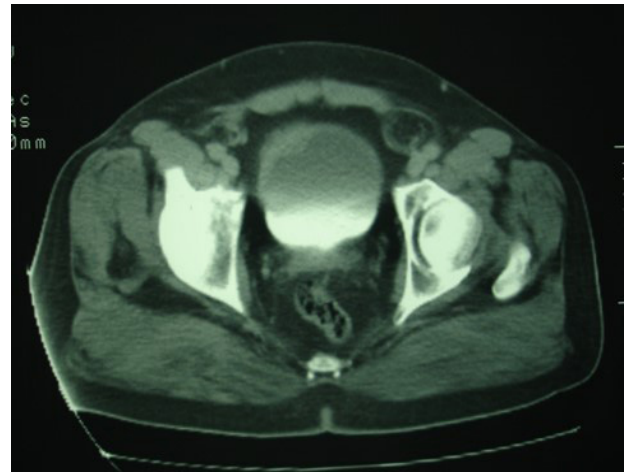
our literature review, our patient is the first case report of neurologically managed prevesicula suture granuloma (PSG).

#### Case presentation

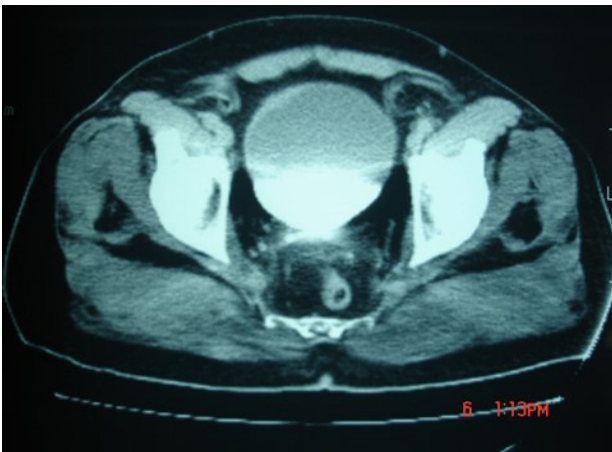
A 47-year-old man with a past surgical history of proper inguinal hernia repair (10 years before) appeared with retracting prevesicula tissue. Moreover, no history of urinary tract infections presented with mild burning micturition and urethral pain. Renal sonography was average; bladder sonography revealed a hypoechoic mass with central heterogeneity and intact mucosal layer extending inside the bladder with normal prevesicula fat, urine culture was negative, and CT scan showed a six-centimeter mass balk with heterogeneous appearance



**Figure 1.** Pre-operative CT SCAN of patient



**Figure 2.** Postoperative CT SCAN of the patient at 6 months



**Figure 3.** Post-operative CT SCAN of the patient at 1 year

retracting prevesiculae tissue toward its center (Figure 1). At cystoscopy, there was a yellowish-white color mass protruding like an orange into the bladder with a well-defined margin. The biopsy revealed no malignancy. The patient was a candidate for the mass's deep and total transurethral resection. The resection was started all over the surface of the tumor, gradually deepening universally all over the mass surface to decrease the mass bulk as much as possible before perforating the bladder; there was no significant bleeding during resection.

In contrast, a small black particle resecting the center of the mass was dropped into the bladder, followed by a yellowish-white opaque, dense fluid of about five milliliters discharged into the bladder. We could see a hole in the center of the resected area; from now onward Patient's bladder was resected with caution so as not to have fluid extravasations, and another black particle again fell from the center of the lesion into the bladder; the mass

was resected as much as possible without complications, total mass resected was 20gr. At the end of the black surgery, a particle was examined macroscopically, which appeared to be a suture ligation of silk material compatible with the patient history of proper inguinal repair. Histological examination of the specimen revealed patchy mono-cellular inflammatory cell infiltration and granulation tissue formation with no evidence of malignancy and acellular fiber compatible with reaction to silk material. (Figures 2,3) As the pathologic cause seemed to be removed by TUR, the patient was discharged on the second postoperative day, and the urethral catheter was removed on postoperative day 5.

### Discussion

The urinary bladder involves 1-4% inguinal hernias (10). A thorough literature review showed that PSG is a rare case report. Most of the studies (5) have managed patients with bloc excision of the tumor with partial cystectomy. We managed our patient by single deep TUR of the mass as a single procedure, following which symptoms ultimately resolved.

In Kise's study (11) they managed their patient with antibiotics and inguinal wound exploration, which did not lead to symptom resolutions. Finally, they required En bloc excision and partial cystectomy of Vesicular mass as granuloma should be considered for a patient with Urinary symptoms with a history of inguinal herniorrhaphy, which may have been performed many years before the time of presentation. Follow-up of our patient at six months and one year showed that the patient was free of urinary symptoms. CT scan of six months and one year post-operative demonstrated decreased thickness and gradual normalization of Residual wall anatomy with standard counter pervesical tissue without retraction, so unnecessary major surgery was avoided.

### Conclusions

By TUR, silk suture materials were removed and inflammatory granuloma was treated.

### Authors' contributions

All authors contributed equally.

### Acknowledgements

We would like to express our appreciation for the Urology Research Center, Sina Hospital, Tehran University of Medical Sciences, Tehran, Iran.

### Conflict of interest

The author declares that there is no conflict of interest.

### Funding

There is no funding.

### Ethical statement

The case agreed to report his issue anonymously after signing the informed consent. This case report is based on the CARE checklist.

### Data availability

Data will be provided on request.

### Abbreviations

PSG Prevesicul suture granuloma  
TUR Transurethral resection

### References

1. Carroll KM, Sairam K, Olliff SP, Wallace D. Case report: paravesical suture granuloma resembling bladder carcinoma on CT scanning. *The British journal of radiology*. 1996;69 821:476-8.
2. Helms CA, Clark RE. Post-herniorrhaphy suture granuloma simulating a bladder neoplasm. *Radiology*. 1977;124(1):56.
3. Pasquale MD, Shabahang MM, Evans SRT. Obstructive uropathy secondary to massive inguinoscrotal bladder herniation. *The Journal of urology*. 1993;150 6:1906-8.
4. Zilberman M, Laor E, Moriel E, Reid RE, Farkas A. Paravesical granulomas masquerading as bladder neoplasms: late complications of inguinal hernia repair. *J Urol*. 1990;143(3):489-91.
5. Daniel WJ, Aarons BJ, Hamilton NT, Duffy DB. Paravesical granuloma presenting as a late complication of herniorrhaphy. *Aust N Z J Surg*. 1973;43(1):38-40.
6. Lynch TH, Waymont B, Beacock CJ, Wallace DM. Paravesical suture granuloma: a problem following herniorrhaphy. *J Urol*. 1992;147(2):460-2.
7. Nagar H. Stitch granulomas following inguinal herniotomy: a 10-year review. *J Pediatr Surg*. 1993;28(11):1505-7.
8. Jackman S, Schulam PG, Schoenberg MP. Pseudotumor of the bladder: a late complication of inguinal herniorrhaphy. *Urology*. 1997;50 4:609-11.
9. Pearl GS, Someren A. Suture granuloma simulating bladder neoplasm. *Urology*. 1980;15(3):304-6.
10. Bisharat M, O'Donnell ME, Thompson T, MacKenzie N, Kirkpatrick D, Spence RA, et al. Complications of inguinoscrotal bladder hernias: a case series. *Hernia*. 2009;13(1):81-4.
11. Kise H, Shibahara T, Hayashi N, Arima K, Yanagawa M, Kawamura J. Paravesical granuloma after inguinal herniorrhaphy. Case report and review of the literature. *Urol Int*. 1999;62(4):220-2.

#### Author (s) biosketches

**Khayyamfar F**, MD, Urology Department, Shahed University of Medical Sciences, Tehran, Iran.

Email: [khayyamfar@yahoo.com](mailto:khayyamfar@yahoo.com)

**Ghasemlouei A**, MD, Imam Khomeini Hospital, Tehran University of Medical Sciences, Tehran, Iran.

Email: [ghasemloeamir@yahoo.com](mailto:ghasemloeamir@yahoo.com)

#### How to cite this article

Khayyamfar F, Ghasemlouei A. Endourological Management of Bladder Mass following Herniorrhaphy. *Translational Research in Urology*. 2023 Nov;5(4):150-152.

DOI: [10.22034/TRU.2022.316632.1089](https://doi.org/10.22034/TRU.2022.316632.1089)

URL: [https://www.transresurology.com/article\\_183193.html](https://www.transresurology.com/article_183193.html)

