



## Acute Urine Retention in Women Due to Urethral Cavernous Hemangioma: A Case Report

Mudib<sup>1\*</sup> and Setya Anton Tusara Wardaya<sup>2</sup>

<sup>1</sup>General Surgery Residency Program, Faculty of Medicine, Sebelas Maret University, Surakarta, Indonesia.

<sup>2</sup>Division of Urology, Department of Surgery, Dr. Moewardi General Hospital, Surakarta, Indonesia.

### Authors' contributions

*This work was carried out in collaboration between both authors. Author Mudib made the manuscript, Author SATW helped in correction of the manuscript. Authors Mudib and SATW are involved in the management of the case. Both authors read and approved the final manuscript*

### Article Information

#### Editor(s):

(1) Dr. Ramesh Gurunathan, Sunway Medical Center, Malaysia.

#### Reviewers:

(1) Frank Peinemann, University of Cologne, Germany.

(2) Ioannis Efthimiou, General Hospital of Kalamata, Greece.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/64508>

Case Study

Received 14 November 2020

Accepted 19 January 2021

Published 06 February 2021

### ABSTRACT

Acute urinary retention due to urethral hemangioma in women is a rare case. Common clinical findings of hemangiomas include lower urinary tract symptoms (LUTS), dysuria, hematuria, urethrorrhagia, and urethral mass. A 78-year-old woman with urinary retention due to thrombotic cavernous urethral hemangioma. On physical examination, a red-blue urethral mass with a smooth surface of 4x3.5x3 cm covering the urethral mouth to the vulva was found. The urethrocystoscopy showed the base of the tumor on the ventral part of the distal urethra. Folley catheter insertion and mass excision were performed. The histopathological diagnosis reveals cavernous hemangioma with thrombus. The patient's postoperative follow-up indicates no complications and recurrences.

*Keywords: Urine retention; cavernous hemangioma; surgery.*

### 1. INTRODUCTION

Acute urinary retention in women is a rare case. The incidence of urinary retention in women is

not well documented. The causes of urinary retention in women vary, including infection, drugs, neurogenic, anatomic, and functional [1]. Urethral hemangioma rarely occurs in women.

\*Corresponding author: E-mail: [mudibmd@yahoo.com](mailto:mudibmd@yahoo.com);

Common clinical findings of hemangiomas include lower urinary tract symptoms (LUTS), dysuria, hematuria, urethrorrhagia, and urethral mass [2,3]. We report a case of a 78-year-old woman with urinary retention due to thrombotic cavernous urethral hemangioma. Currently, there is no report of urinary retention due to thrombus cavernous hemangioma in women.

## 2. CASE PRESENTATION

A 78-year-old woman complained of not being able to urinate. She complained of intermittent spotting on the urethra and a painless lump at the urethral mouth before. Complaints of dysuria and hematuria, were denied. On physical examination, a red-blue urethral mass with a smooth surface of 4x3.5x3cm covering the urethral mouth to the vulva was found. Laboratory test results were within the normal limit. The urethrocytoscopy showed that the tumor was pedunculated with its base on the ventral part of the distal urethra. Folley catheter insertion and mass excision were performed. Excision was carried out following the margins of the tumor and the tumor base in the periurethral tissue. After excision, the urethral mucosa was everted suture with 3-0 absorbable suture. Folley Catheter was maintained for 2 weeks. Histopathological examination showed a mass with a squamous epithelial surface, partially swollen mucosa, with dilated blood vessels filled

with erythrocytes and thrombus. The histopathological diagnosis reveals cavernous hemangioma with thrombus. The patient's postoperative follow-up indicates no complications and recurrences.

## 3. DISCUSSION

Hemangioma is a rare, benign blood vessel tumor and can occur over a wide range of ages. Hemangiomas are most found on the liver and skin; hemangiomas in the genitourinary system are rare. The predilection of hemangiomas in the genitourinary system, among others, are in the kidneys, ureters, bladder, prostate, and urethra. In urinary tract, hemangiomas of the urethra are the rarest [4]. There are two hypotheses of the pathogenesis of hemangioma: 1). It is a congenital disorder that occurs due to the failure of the proliferation of unipotent angioblast cells to become normal blood vessels; 2). It occurs as a result of degenerative processes associated with chronic irritant factors [5].

The clinical symptoms of hemangioma vary depending on the location and size of the lesion. The most common symptoms are hematuria and obstruction. Perineal discomfort, urethral discharge, urethral pain, urethral mass, and difficulty in voiding were also reported in urethral hemangiomas [3,6]. Fang Yong *et al.* reported a case of cavernous urethral hemangioma in 2



**Fig. 1. A. Mass covering the urethral mouth to the vulva, B. Folley catheter insertion and mass excision were performed, C. Mass after excised**

male patients who were misdiagnosed and mistreated due to a rare case that is clinically atypical [7]. Laboratory examinations and other supports generally do not find significant abnormalities. Urethrocystoscopy is a perfect diagnostic method to identify the character, friability, size, position, and the number of hemangioma lesions [8,9,10]. Urethrocystoscopy can help determine a therapeutic strategy and be part of a therapeutic procedure [4]. From several case reports of urethral hemangioma, MRI can be used as a good diagnostic modality. MRI gives more detail characteristic of the lesion in case with uncertain nature or extension [7,8].

Differential diagnoses in urethral mass cases consist of benign and malignant lesions. Benign lesions including urethral caruncle, polyps, warts, urethral prolapse, and periurethral abscess need to be considered. Urethral malignancies to be considered include squamous cell carcinoma, transitional cell carcinoma, adenocarcinoma, sarcoma, and melanoma [2,6].

Since all reported cases of urethral hemangioma are benign, the management depends on the location and size of the lesion. Asymptomatic lesions only need to be observed; some can regress spontaneously [11]. Spontaneous regression may occur due to thrombosis and fibrosclerisation [12]. Treatment options for urethral hemangioma include medications, physical therapy, and surgery [7]. In this case, urethral hemangioma causing acute urinary retention is an indication for excision. Because Urethrocystoscopy has revealed the characteristic of the tumor, we did not perform any imaging study before the excision. Pedunculated tumor excision left small defect that make it possible to directly suture without changing the lumen diameter of the urethra. Although urethral hemangioma is a benign lesion, its management is a challenge because of the risk of urethral stricture or recurrence in cases of incomplete excision [10]. Many reports show neither stricture nor recurrence after the urethral hemangioma excision procedure. To prevent meatal stenosis, eversion suturing of the urethral mucosa can be performed [8]. Kadek Budi *et al.* reported performing vaginal graft urethroplasty to close post-excision urethral hemangioma [10].

#### 4. CONCLUSION

Urethral hemangioma in women is a rare case especially in women. Common clinical findings of

hemangiomas include lower urinary tract symptoms (LUTS), dysuria, hematuria, urethrorrhagia, and urethral mass. Urethral hemangioma causing acute urinary retention is an indication for excision. The patient's postoperative follow-up indicates no complications and recurrences.

#### CONSENT

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understand that her name and initial will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

#### ETHICAL APPROVAL

It is not applicable.

#### ACKNOWLEDGMENT

Grateful to Departement of Surgery RSUD Dr. Moewardi Surakarta for facilitating in writing this case report.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

#### REFERENCES

1. Mevcha A, Drake MJ. Etiology and management of urinary retention in women. *Indian J Urol.* 2010;26(2):230–5.
2. Kanthikar S, Nikumbh D, Dravid N, Rokade C. Female urethral cavernous hemangioma - An unusual cause of hematuria: A Rare Case Report. *Clin Cancer Investig J.* 2015;4(3):462–4.
3. Li CC, Li CZ, Yen CH, Tsai WC, Wu ST, Cha TL, et al. Urethral hemangioma in a prepubertal female patient : report of a rare case. *Med (United States).* 2017;96(13):2016–8.
4. Regragui S, Slaoui A, Karmouni T, El Khader K, Koutani A, Attya AI. Urethral hemangioma: Case report and review of the literature. *Pan Afr Med J.* 2016;23:2–5.
5. Shringarpure S Shrikant, Shringarpure S Sanish, Inamdar M Ravindra, Kulkarni R Sourabh, Patkar VS. Female urethral

- cavernous hemangioma: An unusual cause of hematuria. *Int J Case Rep Short Rev.* 2017;3(3):1–2. [Internet] Available: <https://goo.gl/e4c9Vt> .
6. Ongun S, Çelik S, Aslan G, Yörükoglu K, Esen A. Cavernous hemangioma of the female urethra: A rare case report. *Urol J.* 2014;11(2):1521–3.
  7. Yong F, Juan L, Jinhuan W, Haohua Y, Wei C, Jiacong M, et al. Urethral cavernous hemangioma: A highly misdiagnosed disease (a case report of two patients and literature review). *BMC Urol.* 2019;19(1):1–5.
  8. Sharifiaghdas F, Mahmoudnejad N, Rostaminezhad N, Parvin M. Female urethral cavernous hemangioma, a rare entity: Two case reports and review of the literature. *Urol J.* 2019; 16(1):89–91.
  9. Bolat MS, Yüzüncü K, Akdeniz E, Demirdoven AN. Urethral cavernous hemangioma in a female patient: A rare entity. *Pan Afr Med J.* 2015;22:352.
  10. Santosa KB, Tirtayasa PMW, Yudiana IW, Duarsa GWK, Oka AAG. Urethral cavernous hemangioma in female: Surgical resection and reconstruction with ventral vaginal graft urethroplasty. *Urol Case Reports.* 2019;23:52–4. [Internet]. Available:<https://doi.org/10.1016/j.eucr.2018.12.008> .
  11. Jordan G, McCammon K. Surgery of penis and urethra. In: Kavoussi L, Novicks A, Partin A, Peters C, editors. *Campbell Walsh Urology 10th Edition.* 10th ed. Elsevier Saunders. 2012;961.
  12. Jahn H, Nissen HM. Haemangioma of the urinary tract: Review of the literature. *Br J Urol.* 1991;68(2):113–7.

© 2021 Mudib and Wardaya; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

*Peer-review history:*

*The peer review history for this paper can be accessed here:  
<http://www.sdiarticle4.com/review-history/64508>*