

Case Report

Urethral Polyp in a 21-Year-Old Young Woman: A Case Report and Review of the Literature

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Abstract

Urethral polyps represent a rare cause of lower urinary tract obstruction, documented primarily in pediatrics and more specifically in boys during the first decade of life. We report the case of a 21-year-old patient with no significant past medical history, presenting with a vulvar mass showing progressive enlargement associated with dysuria and mechanical pain, evolving since the age of 10. Clinical examination revealed a 1.5 cm pedunculated, erythematous, and tender mass protruding from the urethral meatus. Cystoscopy confirmed a bleeding-upon-contact polyp implanted on the posterior wall of the meatus, adjacent to healthy bladder mucosa. Complete surgical excision with a surgical bade no 11 was performed under spinal anesthesia, followed by cauterization and urethral catheterization for 48 hours. Histopathological analysis concluded a benign fibro-epithelial polyp without atypia or signs of malignancy. The immediate and six-month postoperative outcomes were excellent, with complete resolution of symptoms. This case, exceptional due to the patient's age and long clinical history, contrasts with available large pediatric series and the few reported female pediatric cases. It underscores the necessity of considering this diagnosis even in young adult women presenting with any urethral mass and confirms the curative effectiveness of simple and complete surgical excision for this benign but potentially debilitating pathology.

Keywords

Urethral Polyp, Young Woman, Fibro-Epithelial, Urethral Prolapse, Surgical Excision

1. Introduction

Urethral polyps represent a rare cause of lower urinary tract obstruction, documented primarily in pediatrics and more specifically in boys during the first decade of life [1, 3, 8]. Their discovery in young women is exceptional, with literature reporting only very rare prepubertal cases [4] and large

series being almost exclusively male [3]. This diagnostic rarity, confronted with the commonality of symptoms such as dysuria or a perineal mass, can lead to delayed management. We report the singular case of a 21-year-old patient with a fibro-epithelial urethral polyp evolving since childhood,

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whose late presentation raises questions about the natural history of these lesions, often considered congenital [1, 3]. Through this clinical case and a targeted literature review, we illustrate the epidemiological, diagnostic, and therapeutic particularities of this rare entity.

2. Case Presentation

A 21-year-old patient, with no known significant past medical history, was seen in our clinic for a vulvar mass that had been progressively increasing in size since the age of 10, associated with dysuria and vulvar pain exacerbated by physical exertion. No hematuria, recurrent urinary tract infection, or other associated symptomatology was reported.

Clinical examination revealed a pedunculated, erythematous mass, measuring 1.5 cm, protruding at the level of the urethral meatus and tender to palpation (Figure 1).



Figure 1. Pedunculated mass (circled in blue), erythematous, protruding at the urethral meatus.

Urethro-cystoscopy showed normal bladder mucosa (Figure 2) and a pedunculated mass on the posterior wall of the urethral meatus, bleeding upon contact and suggestive of a urethral polyp.

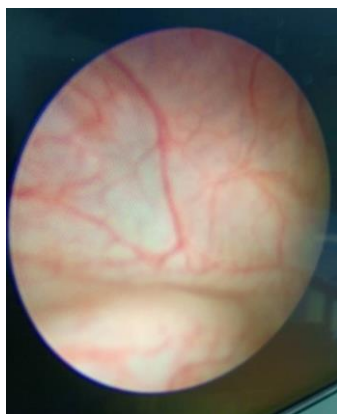


Figure 2. Normal cystoscopic image.

Surgical excision was performed under spinal anesthesia using a No. 11 Surgical Blade (Figure 3), followed by cauterization and urethral catheterization for 48 hours. Histopathological analysis confirmed a benign fibro-epithelial polyp, without atypia or signs of malignancy.



Figure 3. Surgical excision using a No. 11 Surgical Blade.

The outcome was favorable with complete disappearance of symptoms. At six months, the patient was asymptomatic and without recurrence.

3. Discussion

Our observation presents several particularities: the young age of the patient (21 years), the long evolution since childhood, and the symptomatology dominated by pain and dysuria rather than severe obstructive symptoms or recurrent urinary tract infections. This presentation allows for an in-depth discussion by comparing our data with the available literature.

3.1. Epidemiology and Age-Related Particularities

Urethral polyps are a rare pathology, predominantly described in pediatrics. The vast majority of published large series concern male children, with a peak frequency between 5 and 10 years [1, 2, 3, 8]. The series by De Castro et al. involving 17 cases included only boys [3]. The rarity of this entity in females, and even more so in young women, is extreme. The literature review conducted by Ben-Meir et al. in 2005 had identified only 11 published cases of urethral polyps in prepubertal girls, 5 of which came from their own institution [4]. The case we report in a 21-year-old patient is therefore quite exceptional and suggests that minimal congenital lesions, potentially present since childhood, can remain paucisymptomatic and only become apparent later due to local irritative or traumatic factors.

3.2. Clinical Presentation and Differential Diagnosis

The clinical picture of our patient, associating a visible mass, dysuria, and pain triggered by exertion, is consistent with descriptions in the literature, although pediatric series more frequently report genital bleeding (as in 11/12 cases in the series by Ndour et al. [5]) or obstructive symptoms [1, 2, 8].

In a young woman, the differential diagnosis for a bleeding and painful urethral mass must be carefully established:

- 1) *Urethral prolapse*: Much more common in prepubertal girls, it presents as a circular swelling, centered by the urethral orifice, often ulcerated and bleeding on contact [5]. It is a circumferential eversion of the mucosa, not a pedunculated lesion as in our case.
- 2) *Urethral leiomyoma*: A rare benign mesenchymal tumor, more common in women between 36 and 46 years [7]. Its diagnosis is histological, showing a proliferation of smooth muscle cells without atypia.
- 3) *Urethral caruncle*: A typically post-menopausal lesion, considered the equivalent in older women of the polyp in children [4].
- 4) *Malignant tumors*: Such as botryoid rhabdomyosarcoma, although rare, must be excluded, especially in the case of a rapidly growing lesion.

3.3. Diagnostic Methods

In our case, the diagnosis was made by clinical examination and cystoscopy. As shown by various series, ultrasound and voiding cystourethrography (VCUG) are key examinations for positive diagnosis. VCUG can reveal a mobile filling defect in the posterior urethra, often associated with a distended bladder and signs of chronic obstruction (trabeculated bladder, diverticula) [1, 6]. Ultrasound can sometimes directly visualize the pedunculated and mobile lesion [6]. Finally, cystoscopy remains the gold standard examination, allowing visualization of the lesion, its point of implantation (usually at the verumontanum in males), and for obtaining biopsies.

3.4. Therapeutic Management and Follow-up

The standard treatment is complete excision of the lesion. Several techniques are described, the choice of which depends on the size of the lesion, the patient's age, and the operator's experience:

- 1) *Transurethral endoscopic resection*: This is the most commonly reported method, often with fulguration of the base, and it yields excellent results without recurrence in the vast majority of cases [3, 8].
- 2) *Fulguration or laser vaporization* (Nd: YAG): An effective alternative for vascularized lesions [1].
- 3) *Open surgical excision* (via cystotomy): Reserved for very large lesions or when endoscopic access is difficult, as was necessary in the 1-month-old infant reported by

Beluffi et al. [1].

- 4) *Surgical Blade excision*: As in our observation, this simple technique is perfectly suited for accessible distal and pedunculated lesions.

The short duration of postoperative urethral catheterization (48h) that we adopted is similar to protocols of other teams and was sufficient to prevent urinary retention or stenosis [5]. The prognosis is excellent, with complete resolution of symptoms and no tendency for recurrence after complete excision, confirming the benign nature of these lesions [1, 3, 4].

3.5. Histopathological Aspects and Etiopathogenic Hypotheses

Histological analysis of our specimen concluded a benign fibro-epithelial polyp. This description is unanimously reported in the literature: it is a lesion composed of a central core of more or less edematous and inflammatory fibrovascular tissue, covered by a transitional or squamous epithelium [1, 3, 4].

The etiology remains debated. The most widely accepted theory is a congenital, probably hamartomatous origin, related to the persistence of embryonic tissue (such as the Müllerian tubercle) or a defect in the fusion of urogenital structures [3, 8]. This hypothesis is supported by the young age of most patients and the frequent association with other congenital anomalies of the urinary tract (vesicoureteral reflux, posterior urethral valves, pelvic kidney) found in nearly 50% of cases in the series by De Castro et al. [3]. Association with Beckwith-Wiedemann syndrome has also been described [1].

4. Conclusion

The fibro-epithelial urethral polyp in young women is an exceptional entity, whose rarity contrasts with its relative frequency in male pediatrics. Our observation, with symptom onset in childhood and late revelation in adulthood, underscores the potentially congenital nature of this lesion. The diagnosis, suspected clinically upon finding a pedunculated and bleeding urethral mass, is confirmed by endoscopy and histology. The differential diagnosis must primarily rule out urethral prolapse in younger girls, and leiomyoma or malignant pathology in older women.

Complete surgical excision, achievable by various techniques (endoscopic, laser, or surgical blade), ensures definitive and curative treatment, without a tendency for recurrence, as evidenced by the six-month follow-up of our patient.

Abbreviations

VCUG Ultrasound and Voiding Cystourethrography

Author Contributions

Hassami Sawadogo: Conceptualization, Methodology, Resources, Supervision, Writing – original draft, Writing – review & editing

Clotaire Alexis Marie Kiemdiba Donega Yameogo: Conceptualization, Investigation, Resources, Validation, Writing – original draft, Writing – review & editing

Abdoul-Karim Pare: Investigation, Resources, Validation, Writing – original draft, Writing – review & editing

Fatao Ouedraogo: Investigation, Resources, Validation, Writing – original draft

Jean de la Croix Millogo: Investigation, Resources, Validation, Writing – original draft

Brahima Kirakoya: Conceptualization, Investigation, Resources, Validation, Writing – original draft, Writing – review & editing

Adama Ouattara: Supervision, Writing – original draft, Writing – review & editing

Fasnewinde Aristide Kabore: Supervision, Writing – original draft, Writing – review & editing

Consent for Publication

Consent to publish was obtained from the patient.

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this article.

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