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# REVIEW ARTICLE

# A RARE CASE PRESENTATION OF URETHRAL CARUNCLE AS UROTHELIAL CARCINOMA IN SITU IN A MIDDLE-AGED FEMALE

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**ABSTRACT**

***Introduction:*** Urethral caruncles are the most frequent benign tumours of the female urethra. The etiology and pathogenesis of urethral caruncle are not well understood but many theories have been proposed. ***Case presentation:*** We report a case of a 48 years old woman with chief complaints of lower abdominal intermittent pain and decreased flow of urine with a mass in the urethral region. On clinical examination, a red polypoidal lesion was seen at the urethral meatus suggestive of urethral caruncle. Patient underwent surgical excision with cystoscopy. The Cystoscopy revealed trabeculated bladder wall without evidence of any mass. The final histopathological examination showed urothelial carcinoma in situ. The patient has been on regular follow up with 3 monthly cystoscopies for the last 2 years which have been normal and no recurrence of lesion and with improved urinary flow. ***Conclusion:*** Urethral caruncle should be differentiated from other urethral lesions, such as urethral prolapse, periurethral gland abscess, or other benign or malignant neoplasm.



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# INTRODUCTION

Urethral caruncles are the most frequent benign tumors of the female urethra, typically presenting as a red fleshy and easily friable nodule of the posterior urethra near the meatus in postmenopausal women.[1] It can be asymptomatic or can be associated with various symptoms and signs such as pain, vaginal bleeding, hematuria and bladder outlet obstruction.[2]

**Case presentation:** A middle-aged female of 48 years of age presented to the outpatient department of a tertiary care center with complaints of lower abdominal intermittent pain and decreased flow of urine with a mass in the urethral region. On clinical examination, a red polypoidal lesion was seen at the urethral meatus suggestive of urethral caruncle (Figure -1). Rest of the clinical examination was normal. Ultrasound of the abdomen showed evidence of thickened inflammatory bladder wall suggestive of cystitis. Uroflowmetry showed decreased flow rate with a postvoid residue of 100 ml/480 ml. Patient underwent surgical excision with cystoscopy. The Cystoscopy revealed trabeculated bladder wall without evidence of any mass. The final histopathological examination showed urothelial carcinoma in situ (Figure-2).

The patient has been on regular follow up with 3 monthly cystoscopies for the last 2 years which have been normal and no recurrence of lesion and with improved urinary flow.

# DISCUSSION

Urethral caruncle was first described in 1750 by Samuel Sharp. It is a benign, polypoid lesion of the urethra that typically presents as a fleshy outgrowth at the posterior lip of the distal urethral mucosa. The most common occurrence is seen in postmenopausal women, although there have been rare cases reported in premenopausal women and girls.[3] The etiology and pathogenesis of urethral caruncle are not well understood but many theories have been proposed. Dmochowski et al. hypothesized that urogenital atrophy due to oestrogen deficiency plays an important role in the development of urethral prolapse in postmenopausal women and may contribute to the development of urethral caruncle by a similar mechanism.[4] Novak proposed that urethral caruncles are caused by postmenopausal shrinkage of vaginal tissue with secondary changes occurring due to altered environmental conditions.[5]

**Figure 1. Clinical picture of urethral caruncle**

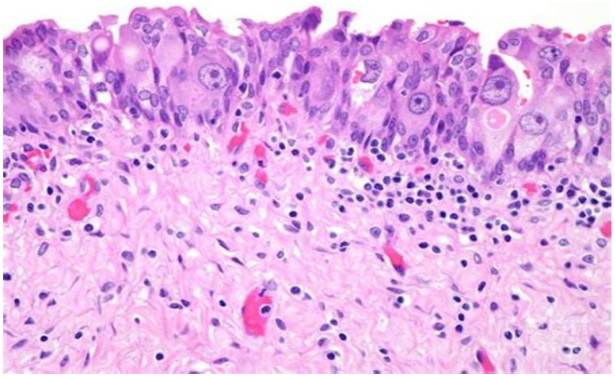

**Figure 2. Histopathological examination revealed urothelial carcinoma in situ**

The urethral caruncle is usually a benign, pedunculated, and highly vascular mass at the urethral meatus. Generally, small in size and asymptomatic at diagnosis. Though, it can cause distressing physical symptoms ranging from bleeding, pain, soreness, tenesmus and dysuria, either outflow obstruction or urinary retention.[6,7] There is a need to differentiate urethral caruncles from other urethral lesions, such as urethral prolapse, periurethral gland abscess, or other benign or malignant neoplasm. Although uncommon, a spectrum of neoplasms may mimic urethral caruncle clinically, including adenocarcinoma, urothelial carcinoma, squamous cell carcinoma, melanoma, lymphoma, and sarcoma.[8,9]

Initial treatment can be conservative with medication such as anti-inflammatory agents and topical oestrogen; however, surgical intervention is traditionally reserved for women with large symptomatic lesions, failure to respond to conservative treatment, for those with uncertain diagnosis or those with atypical appearances. Similarly, the lesion may recur after resection. Various surgical techniques have been described in the literature like pinching, snaring, ligating, cutting, cautery by heat, destruction with chemicals and fulguration. Ferrier in 1926, formulated the principles and aims of the surgical technique as follows:

- Complete eradication.
- Restoration of the urethra to normal, avoiding stricture or pulling down of the bladder neck.
- Preserving a specimen for histology.
- Making the procedure simple and convenient with faster recovery.

In more recent literature, cystourethroscopy is recommended by most researchers prior to surgical intervention to rule out serious bladder and urethral abnormalities like carcinoma, diverticulum or abscess, when the cause of haematuria is uncertain.[10]

# CONCLUSION

This case report highlights a rare occurrence of urothelial carcinoma in situ of a urethral caruncle which was managed by surgical excision and followed up closely for recurrence. It emphasizes the varied presentation of urethral caruncle and importance of final histopathological diagnosis in effectively management of these case.

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