

Oncology

Urethral caruncle with intestinal metaplasia: A case report and literature review

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ABSTRACT

A 66-year-old female presented with a urethral caruncle. Histological features of incomplete intestinal metaplasia were reported. Only five previous cases of intestinal metaplasia in urethral caruncles have been reported. The mechanism of this tissue transformation remains unclear but theorised aetiologies include embryological and infective causes. Intestinal metaplasia carries a malignant potential in other organs, most notably the bladder. Therefore we recommend urethral caruncles be completely excised with prolonged follow up for atypical variants.

Introduction

Urethral caruncle is a benign eversion of transitional epithelium commonly presenting with lower urinary tract symptoms in post-menopausal women. Only five previous English cases of intestinal metaplasia (IM) in this lesion have been reported.¹ Metaplasia is a well-described reversible transition of one tissue type to another in response to chemical or infective stress.

Intestinal metaplasia most commonly occurs in the stomach primarily in response to *Helicobacter pylori* infection along with secondary risk factors (smoking, certain foods and genetics). It carries a pre-malignant potential for gastric adenocarcinoma. Urogenital metaplasia is most commonly seen as bladder epithelium transitions to a squamous epithelium in response to schistosomiasis infection. This is a well-described pre-cancerous process. Although IM of the urinary tract is rare, it is most commonly described in the bladder.²

We present a 66-year-old female patient with polypoid focal incomplete intestinal metaplasia without dysplasia of an excised urethral caruncle.

Case report

A 66-year-old Caucasian female presented to her private Gynaecologist with two episodes of post-menopausal bleeding (PMB) three months apart, she was not on hormone replacement therapy and was

treated for a single uncomplicated *E.coli* urinary tract infection (UTI) and a non-smoker. She had no previous history of surgery. Routine PMB haematological, biochemical and imaging investigations were normal. On examination under anaesthetic a 1 × 1 cm polypoid urethral caruncle was identified, completely excised and sent for histopathology (Fig. 1). Hysteroscopy and endometrial sampling revealed a benign endometrium. Microscopy demonstrated focal intestinal metaplasia with goblet cells but no paneth cells within the urethral caruncle (Fig. 2). A final diagnosis of urethral caruncle with incomplete intestinal metaplasia was reported and the patient was referred to an urologist for consideration of cystoscopy. At two weeks follow-up, there was no further bleeding.

Discussion

Intestinal metaplasia in the urethra is extremely rare with five other English cases documented in women and only two in men.¹ Prior female sufferers ranged from aged 26–57 years with two out of five previous cases being in black women. The youngest women affected (26 years of age) had a history of pemphigus vulgaris and was receiving long-term corticosteroids.³

The infrequency of this type of metaplasia is possibly related to its atypical pathogenesis. Along with chronic irritation, it is hypothesized that the source of the intestinal epithelium in the urinary tract could be due to the sequestrations of aberrant cloaco-genic glands in the urethra during the embryological development of the cloaca.⁴

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Fig. 1. A red polypoid nodule of the periurethral region.

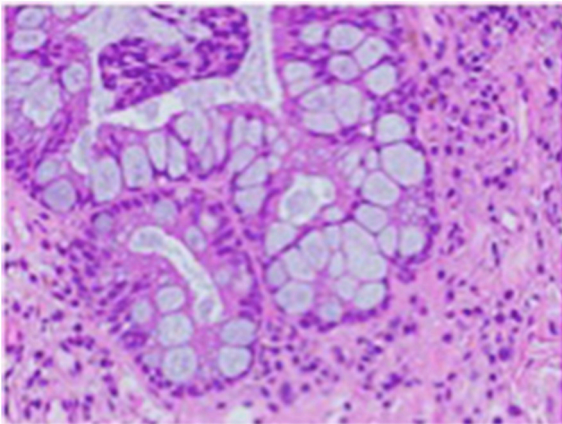


Fig. 2. Gram stain showing interspersed irregular distribution of goblet cells not accompanied by other intestinal features. These histological features represent incomplete intestinal metaplasia.

Given the deficit of data with regards to urethral intestinal metaplasia, it is difficult to postulate a numeric malignancy potential. Within

the bladder, there is conflicting data as to whether IM is a true pre-malignant lesion. However, the largest series of 89 patients with vesical IM followed for 21 years reported an incidence of 0.1–0.9% of bladder tumours containing intestinal metaplasia with a 5% post-operative recurrence rate and 1% rate of progression to adenocarcinoma.⁵ They concluded that although the natural history of IM of the bladder was unknown, a recommendation for complete resection and prolonged post-operative follow up was most suitable given their findings.

Conclusion

Intestinal metaplasia of the urethra is very rare. Complete excision of all urethral caruncles is recommended with lesions exhibiting metaplasia warranting urological referral for consideration of cystoscopy and regular follow-up for two years.³

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Declaration of competing interest

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