CASE REPORT

Familial bulbar urethral strictures

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SUMMARY

Strictures are commonly encountered in the urological practice. The most common aetiologies are infection, trauma and iatrogenic events. Familial occurrence of urethral stricture is exceptionally rare. We present a case in which bulbar urethral strictures developed in a father and his two sons.

BACKGROUND

Bulbar urethral strictures are commonly encountered in the urological practice. The most common aetiologies are infection, trauma and iatrogenic events. They can occasionally be congenital. Although it has been reported that some congenital strictures can present in the adulthood, a familial history is exceptionally rare. We present a case in which bulbar urethral strictures developed in a father and his two sons.

CASE PRESENTATION

A 30-year-old man presented with a history of gradually progressive straining during micturition and narrowing of stream for 3 years. There was no history of trauma, urinary infection, surgical intervention or instrumentation of the urethra. The urethra appeared normal on palpation. The bladder was clinically palpable. The patient was accompanied by his younger brother and his father. On further questioning, it was revealed that the brother, aged 28 years, had also noticed narrowing of stream for 5 years. He was evaluated at a local hospital where a retrograde urethrogram (RGU) was performed, which was suggestive of a short segment bulbar stricture (figure 1B). The father, aged 60 years, informed that he too had suffered from a similar problem in the early part of the third decade of his life for which he had to undergo urethral dilations twice, following which he remained asymptomatic. There was no history

suggestive of an acquired stricture in either of them. The father also had his earlier RGU which showed a small segment bulbar urethral stricture (figure 1C). Subsequently, it was revealed that the grandfather of the index case also suffered from voiding problems throughout his life and had needed some interventions but the records were not available. There were no other male members in the immediate family.

INVESTIGATIONS

Uroflowmetry revealed a pattern suggestive of urethral stricture in the index case. Ultrasound showed bilateral hydroureteronephrosis along with thick bladder wall with a postvoid residual volume of 790 mL. His urea level was 72 mg/dL and creatinine 2.1 mg/dL. A suprapubic catheterisation was performed. An RGU revealed a short segment bulbar urethral stricture (figure 1A). His urea and creatinine levels normalised after 3 weeks.

The uroflowmetry of the younger brother also revealed an obstructive pattern; however, other investigations were within normal limits.

TREATMENT

Cystoscopy of the index case revealed a stricture in the mid-bulbar part of the urethra for which an optical internal urethrotomy could be performed. The catheters were removed subsequently.

The younger brother too had a cystoscopic examination which revealed a stricture in the bulbar urethra for which an optical internal urethrotomy could be performed.

OUTCOME AND FOLLOW-UP

Both the patients made uneventful recovery, are currently asymptomatic and are on follow-up.

Figure 1 (A) The retrograde urethrogram (RGU) of the index case showing a short segment bulbar urethral stricture (arrow). (B) The RGU of the younger brother showing a short segment bulbar urethral stricture (arrow). (C) The RGU of the father revealing a similar stricture (arrow).

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DISCUSSION

Urethral strictures can be congenital or acquired. With a careful history, it is often possible to identify the cause of stricture, but in some patients this may not be delineable. Such 'idiopathic' strictures are occasionally encountered in the clinical practice. Some of these strictures can also be congenital but presenting at a late age. Such congenital strictures tend to be located at the junction of proximal and distal thirds of the bulbar urethra. This is the part where the urethra derived from the urogenital sinus meets the part derived from the penile folds. Though the site of stricture in the cases presented above is not very typical of that described for congenital strictures, the absence of an identifiable cause and the nearly similar site of urethral involvement in all the three cases suggest their congenital nature. Such cases present as isolated reports and presence of a positive family history can be considered exceptional. There are four case reports in the English literature that describe the occurrence of familial strictures in sets of brothers.¹⁻⁴ To the best of our knowledge, there is only one report in the English literature that describes the familial strictures in two generations, in father

and his sons. The authors of this case report also *suggest*, although inconclusively, the presence of stricture in the grandfather too.⁵ Ours is the second such report in the English literature which suggests the presence of familial urethral strictures in two generations. There is a probability that the grandfather of our index case also suffered from urethral stricture but due to the lack of records, this can only be presumed. Management with optical internal urethrotomy or dilatations seems to be sufficient although some patients may need a formal anastomotic urethroplasty.¹

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Patient consent None.

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Learning points

- Urethral strictures may have a family history, albeit rarely.
- Such familial strictures tend to involve the bulbar urethra.
- Surgical intervention is usually needed and is therapeutic.

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