Case Report

Posterior Urethral Valves with Congenital Urethral Stricture

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Abstract. Management of stricture urethra remains a challenge to the treating surgeon irrespective of the etiology, age and site. Association of co-morbid conditions makes the task of surgeon even more difficult. We are sharing our experience in managing a case of posterior urethral valve with congenital stricture of posterior urethra.

Keywords: Posterior urethral valve, Preanal anterior coronal approach, Urethral stricture

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Introduction

Posterior Urethral Valve (PUV) is the commonest cause of lower urinary tract obstruction in male infants.[1-3] In the present era the most common mode of presentation is antenatal diagnosis. Postnatally, PUV can have a broad spectrum of presentations ranging from a life threatening pulmonary hypoplasia due to oligohydramnios, to mild obstruction or symptoms that may escape early detection and manifest only in later childhood, adolescence or even adulthood.[4-6] Universally accepted treatment protocol for managing PUV includes cystoscopic valve ablation using cold knife or electrocautery or LASER. PUV associated with congenital stricture urethra is very rare. We are sharing our experience in managing a case of posterior urethral valve with congenital stricture of posterior urethra.

Case Report

Thirteen months old boy, a case of antenatally diagnosed posterior urethral valve underwent suprapubic cystostomy (SPC) at day 2 of life in some other institute and came to our department at the age of 1 year. The child was investigated with micturating cystourethrogram (MCU) [Fig. 1] which showed dilated posterior urethra, irregular bladder, abrupt cut-off between posterior and anterior urethra and thin stream in anterior urethra. Urethrocystoscopy (7.5F) was done but scope was not negotiable 5cm beyond external urethral meatus due to tight stricture. The decision was taken to operate after obtaining consent for the same. We used the pre-anal anterior coronal approach described previously by us for managing posterior urethral strictures.[7] Lay open of the posterior urethral stricture (nearly 1.5cm) was done (Fig. 2) guided by urethral dilators both from external urethral meatus and SPC site. Posterior urethral valve was incised at 5, 7 and 12 O'clock positions through urethrostomy route. Stricture part was laid open and perineal urethrostomy was made. The postoperative period was uneventful and the child recovered well. Before discharge SPC was removed and strapped to close. During

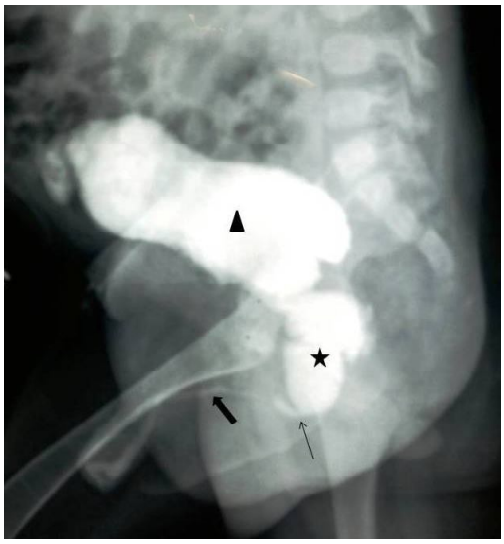

Fig. 1. Micturating cystourethrogram (MCU) showing dilated posterior urethra (asterix), irregular bladder (arrow head), abrupt cut-off between posterior and anterior urethra (thin arrow) and thin stream in anterior urethra (thick arrow)

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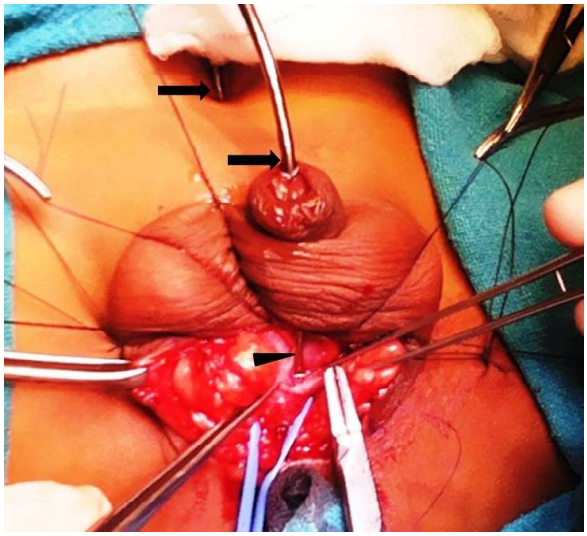

Fig. 2. Intraoperative photograph showing lay open of the posterior urethral stricture nearly 1.5 cm (arrow head) guided by urethral dilators (thick arrow) both from external urethral meatus and SPC site

follow up patient was advised to calibrate anterior urethra regularly. At last follow up, 6 months back, child was doing well without any urinary complaints and is waiting for closure of perineal urethrostomy.

Discussion

The most common cause of bladder outlet obstruction in boys is posterior urethral valve. PUV associated with congenital posterior urethral stricture is very rare. Various treatment options are available for managing cases with PUV, most widely accepted being the valve ablation.[8-10] Though posterior urethral stricture was described in PUV patients after valve ablation,[11-15] congenital posterior urethral stricture in PUV patients was not described in English literature to the best of our knowledge.

Posterior urethral stricture is considered the most debilitating because, if not managed properly, may lead to severe impairment of the quality of life, by affecting continence and potency. There are several treatment options for managing urethral strictures in children. In general they include, urethral dilatation, endoscopic visual internal urethrotomy, open urethral reconstruction (single stage or staged). We have used pre anal anterior coronal approach in our case to localize the stricture segment. Pre anal anterior coronal approach is an established terminology given by the senior author initially for managing cases of aphallia and then further extended to include posterior urethral strictures as well.[7,16] It is different from perineal approach in terms of incision, better exposure, minimal blood loss and ability to tackle and identify the stricture. In our case, as the stricture was congenital, long segment and associated with PUV, so authors decided to repair it in a staged manner by laying open it in first stage.

Conclusion

We would like to convey the message that the possibility of congenital posterior urethral stricture should be kept in mind while dealing with a case of PUV, where scope was not negotiable beyond anterior urethra into the dilated posterior urethra. Staged treatment is a possible and good option of repair of this type of stricture.

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