

Case study

Meato cutaneous fistula after tubularized incised plate(TIP) repair- An unusual delayed complication

ABSTRACT:

Aims: To report a very unusual delayed complication after tubularised incised plate repair with preputioplasty for a distal penile hypospadias

Presentation of Case: A 2^{1/2} year old boy presented with a distal penile hypospadias. He underwent an uneventful tubularized incised plate repair with preputioplasty(on parents request) in September 2018. 1 month after surgery there was a small preputial ulcer on the ventrum. Preputial retraction was done under GA and the meatus was normal. However, at 2 years the child presented with a fistula. During repair it was found that the neourethra was normal and the meatus was communicating with the prepuce giving the appearance of a fistula. Prepuce was retracted and the inner and outer prepuce layers were closed. Recovery was uneventful

Discussion: Urethral fistula is the commonest complication after hypospadias surgery, the usual site being the neourethra. A fistula between the neomeatus and the prepuce is extremely uncommon. Treatment is separating the prepuce from the meatus and closing the 2 preputial layers.

Conclusion: A very unusual complication is reported after preputioplasty. Causes and treatment are discussed.

INTRODUCTION: Hypospadias repair is a delicate challenging surgery wherein the commonest complication that can occur are urethral fistula, meatal stenosis and diverticula of the neourethra. We report a very unusual delayed fistula after hypospadias surgery.

CASE REPORT: A 2^{1/2}-year-old boy underwent a TIP repair with preputioplasty (on request) for a distal penile hypospadias in Sept 2018. The postoperative period was uneventful and the urethral stent was removed on the 8th PO day. The child voided well in a good stream through the neo meatus. At 1-month follow up there was a small preputial ulcer and the parents were unable to retract the prepuce. Preputial retraction and meatal calibration were done under GA 2 months after surgery. At 3 months FU the child was voiding well and the preputial ulcer had healed. In Sept 2020 the child presented with voiding from a fistula. O/E there was preputial stenosis and a fistula in the distal prepuce. (Fig 1) The child was taken for repair of the fistula. Under CB, the prepuce was retracted. To our surprise the neomeatus was adherent to the prepuce giving the appearance of a urethral fistula. (Fig 2) The prepuce was completely retracted and separated from the meatus and the inner and outer preputial skins were closed. A 6 fr stent was kept. Post opt period was uneventful. The stent was removed on the 4th PO day.

DISCUSSION: Hypospadias is one of the commonest congenital anomalies of the male genital system the incidence of hypospadias is about 1 to 2 in 200 to 300 live births to 3 in 1000 live births⁽¹⁾. The commonest site is the distal penile or a coronal hypospadias⁽²⁾. The surgical goals of hypospadias repair are full straightening of the penis, formation of a hairless urethra of uniform caliber and adequate size, positioning of the meatus at the tip of the glans and normal penile appearance with minimum complications⁽¹⁾. The TIP repair described by Snodgrass in 1994 is easy, has good cosmetic results and has minimum complications. A preputioplasty can be combined with this technique to provide a normal penile appearance. The preputioplasty can be done for the following reasons: 1. Religious. 2. Psychological benefit for the child. 3. Foreskin plays an important role in normal sexual intercourse. 4. It serves as a tissue reserve if the hypospadias fails.⁽³⁾ Reconstruction of the prepuce should be done only if the prepuce can be approximated without tension in the midline at the site of the coronal groove⁽³⁾.

The usual complications of any hypospadias surgery are urethral fistula, meatal stenosis, urethral diverticula, flap necrosis, penile torsion, infections, persistence chordee and complete dehiscence.⁽²⁾ the commonest being urethral fistula and meatal stenosis.⁽²⁾ However, the common complications of the TIP repair are meatal stenosis and fistula⁽²⁾

The urethrocutaneous fistula may occur anywhere along the neourethra. The usual site of the fistula is in the neourethra usually proximally⁽⁴⁾. However, the other common sites include the site of the original meatus, glans penis, at the coronal level in tubularization urethroplasty and at the site of anastomosis in flap urethroplasty.⁽⁴⁾

A fistula between the neomeatus and the prepuce is extremely uncommon and has not been reported. The causes can be, reluctance to retract the prepuce after surgery, poor hygiene and adhesion of the prepuce to the meatus followed by infection.

Treatment would be separation of the prepuce from the meatus followed by closing the inner and outer preputial layers. In a situation where there is difficulty in retracting the prepuce or reluctance, circumcision should be offered.

CONCLUSION: A case of delayed formation of a meato cutaneous fistula after TIP repair is presented for its rarity. The aetiology and the treatment options are discussed.

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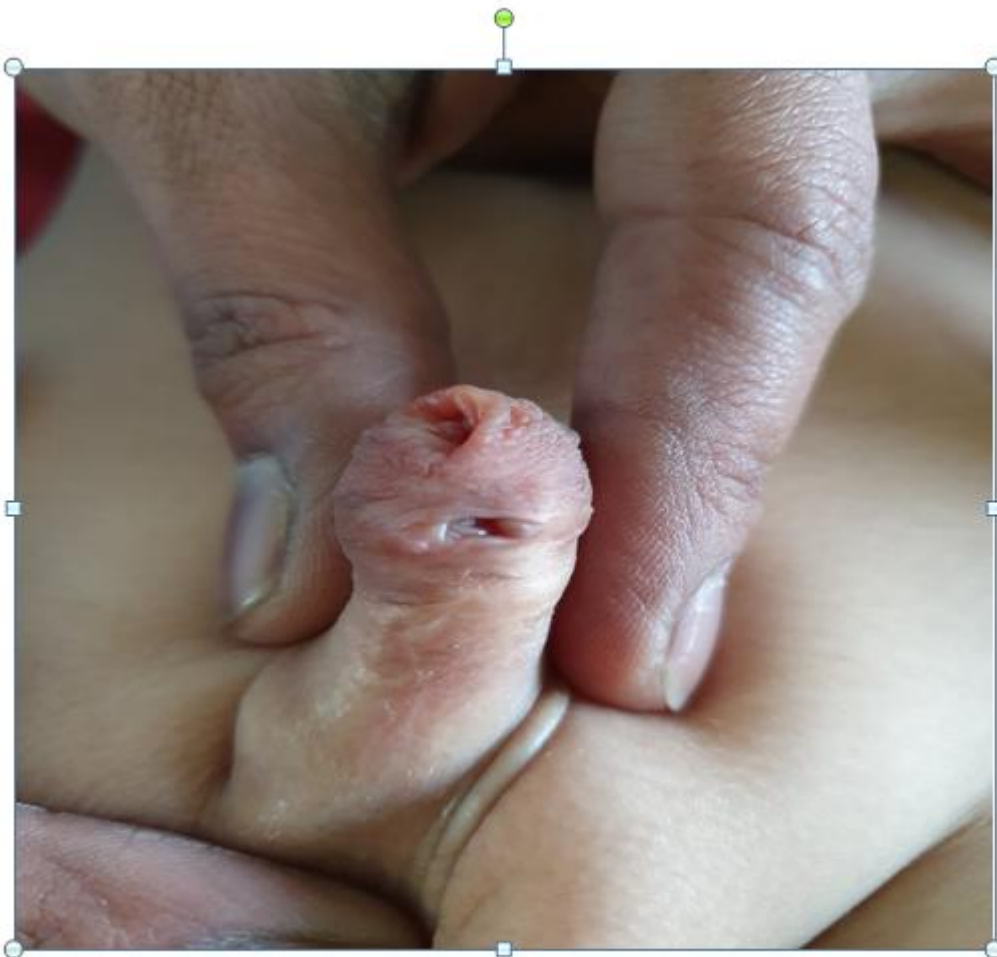


Fig 1: Fistula in the prepuce



Fig 2: Appearance after retracting the prepuce. Normal meatus and neourethra

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