Isolated Penile Torsion in Brothers: A Case Report

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Abstract

Penile torsion can be congenital and associated with hypospadias and chordee, or can be acquired after circumcision. The incidence of isolated neonatal penile torsion was 1.7 to 27% in the literature. The majority were between 10° and 20°. Generally, torsion was to the left in cases. The techniques for correction of penile torsion described in the literature are penile de-gloving and reattaching of skin, resection of Buck’s fascia incising the base of the penis and removing angular ellipses of corporeal tissue with subsequent plication of tunica, and dorsal dartos flap rotation in severe cases.

In conclusion, penile torsion may be familial. Therefore, brothers should be examined carefully. The degloving and realignment technique is successful in isolated penile torsion.

Key words: Penis, torsion, child; surgery, penile malformations

Introduction

Penile torsion is a malrotation of the glans with or without other penile or urethral malformations, such as chordee or hypospadias. Torsion is a penile curvature malformation that can be congenital and associated with hypospadias, or can be acquired after circumcision [1, 2]. Penile torsion in childhood is usually in the counterclockwise direction, more common on the left side, if the physician is facing the patient. Isolated penile torsion has also been described [3, 4], but reports are rare, with the largest series reporting 105 cases in the neonatal period [5]. The true incidence of the deformity is unknown. However, some authors reported the incidence of isolated penile torsion varying 1.7 to 27%. Severe penile torsion is reported in 0.7% of cases. The majority (87%) were between 10° and 20°. The torsion is divided into mild (<45 degrees), moderate (45-90 degrees) and severe (>90 degrees) [3]. Although the penis may be deviated more than 90 degrees from the midline, the orientation of the corporal bodies and the spongiosum at the base of the penis is normal. Torsion was to the left in 99% of cases [5].

Congenital penile torsion is a malformation of an unknown cause in which there is a three-dimensional malrotation of the corporal bodies or sometimes just the glans. The abnormal penile rotation is usually counterclockwise, more common on the left side [6], and often associated with other penile or urethral malformations, such as chordee or hypospadias [7].
Case

Two brothers, 10 and 8 years old, applied for circumcision and cosmetic problems in their penis. Physical examination findings showed 80° (Figure 1a) and 45° (Figure 2a) penile torsion, respectively, directed in a counterclockwise fashion.

The corrective procedures were performed under general anesthesia. The degree of torsion is measured by deviation of the urethral meatus from the midline and this is confirmed by a Gittes test. After a circumferential subcoronal incision, the penile skin was degloved to the penoscrotal junction, and all adhesions tissues were released. Any residual torsion was corrected using a 5/0 polyglactin absorbable suture applied to the desired 12 o'clock position of the penile skin, adjacent to the glans and to a location counter to the direction of the torsion in the degloved penile skin sleeve. A reduction of redundant skin allowed for tightening of the skin, prevented rotation after the application of the suture at the 12 o’clock position, and allowed for proper final alignment of the penis and better cosmesis (Figure 1b) (Figure 2b). The remaining circumferential incision was closed using 5/0 polyglactin absorbable suture material.

Discussion

Although penile torsion is not frequent in childhood, it is not so rare. Each individual pediatric urologist will face a few cases of torsion during the life of their practice. Most children who present are asymptomatic; however, their parents usually wish to correct the cosmetic defect. Our cases had the cosmetic defect.

The techniques for correction of torsion described in the literature are penile degloving and reattaching of skin, resection of Buck’s fascia, incising the base of the penis and removing angular ellipses of corporeal tissue with subsequent plication of tunica, dorsal dartos flap rotation [3, 4, and 6]. The currently available surgical techniques for correction of this abnormality vary from the simple release of skin adhesions and realignment of the skin to resection of Buck’s fascia and the tunica albuginea [8, 9].

Resection of Buck’s fascia or the tunica albuginea may result in damage to the neurovascular bundles, which run from the 11 o’clock and 1 o’clock positions around the corporeal bodies to the 7 o’clock and 5 o’clock positions, and thus may jeopardize future sexual function [10]. Keloid, lymphedema and ugly scarring at the base of the penis were reported by the author in this surgery.

Bar-Yosef et al. demonstrated that adequate skin release, tightening, and realignment during skin closure lead to satisfactory results in most patients, with minimal complications in the Degloving and Realignment Technique [2]. The potential for complications is greater with more aggressive approaches to penile torsion, such as those involving excision of the tunica albuginea or Buck’s fascia and dissection of the neurovascular bundles [NVB]. The potential operative risks include bleeding, NVB injury, and penile shortening. The method we have used bears minimal surgical complications and can easily be applied in cases of penile torsion combined with...

Figure 1a. The view of the first patient.
Figure 1b. Postoperative appearance of first patient.
Figure 2a. The view of the second patient.
Figure 2b. Postoperative appearance of second patient.
other penile abnormalities, including hypospadias [2].
We applied this technique because it was suitable in our cases. We preferred this technique because of its minimal invasiveness, compared to other techniques. Moreover, it has been easily and successfully performed. Our results were successful.

The technique first described by Fisher and Park [3] showed that, at a short-term follow-up, cosmetic outcomes were satisfactory in all 8 patients. No complications or evidence of residual torsion were reported. In this technique, a dorsal dartos flap is rotated around the right side of the penile shaft to correct counterclockwise (rotation to the left) torsion. The technique was successfully replicated by Bauer and Kogan, and none of their 25 patients needed further repair [11]. Torsion was completely corrected in 16 patients, with the remainder of patients having an insignificant (<30°) amount of residual torsion. In moderate and severe torsion, this technique would not be strong enough to hold the expanding and rotating force of an erection and may lead to undercorrection or recurrence [12]. However, long-term results for this approach are still lacking. More extensive repair may be needed for children with associated hypospadias or chordee [7].

Isolated congenital penile torsion may be familial, father to son [13]. This malformation wasn’t defined in brothers. We detected the disease in brothers.

**Conclusion**

In conclusion, penile torsion may be familial. Therefore, brothers should be examined carefully. The degloving and realignment technique is successful in isolated penile torsion.

**Conflict of interest statement**

The authors declare no competing interest. No financial support was received for this paper.

**References**