

## Correction of a 180 Degree (Upside Down) Penile Torsion in a 55-Year-Old Patient with Severe Erectile Dysfunction

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### ABSTRACT

In the present case report, we describe a new technique for penile torsion correction that may be used in select patients. A 55-year-old male presented to our facility with a long history of erectile dysfunction. He had counterclockwise 180° (half-circle) penile torsion and severe arteriogenic erectile dysfunction. During surgery, the decision was made to do a circumcision incision with degloving of the penis. We took down all skin and subcutaneous adhesions. This procedure resulted in partial correction of the torsion. Then, bilateral corporotomies were done with corporeal dilation and placement of 9.5 mm diameter, 18 cm long Genesis devices (Mentor Corp; Santa Barbara, CA, USA). This led to full correction of the torsion. We closed the wound with a drain inside. He had an uneventful postoperative period and was doing well 6 months after surgery.

### INTRODUCTION

Penile torsion is a rotational defect of the penile shaft in which the median raphe passes in a spiral manner from the base of the penis to the meatus [1]. Usually, the torsion is counterclockwise (ie, toward the left) and the urethral meatus is placed in an oblique position [1,2]. Penile torsion is often associated with hypospadias or chordee and rarely presents as an isolated anomaly. The torsion may be caused by skin and dartos attachments or involvement of Buck's fascia [3].

When correction of penile torsion is appropriate, various repairs have been suggested: (1) penile shaft skin rotation; (2) suturing the tunica albuginea to the periosteum of the pubis; (3) dorsal dartos flap rotation; (4) Nesbit or U-shaped plication sutures; or (5) diagonal corporeal plication sutures [3]. In the present case report, we describe a new technique for penile torsion correction that may be used in select patients.

### CASE REPORT

A 55-year-old male presented to our facility with a long history of erectile dysfunction (ED). The ED was predisposed by a 15-year history of uncontrolled diabetes mellitus and a 30-year history of cigarette smoking.

On completion of his work-up, the patient was diagnosed as having severe arteriogenic ED with counterclockwise 180° (half circle) congenital penile torsion (Figure 1). He was scheduled for surgery.

During surgery, we made the decision to do a circumcision incision with degloving of the penis. We took down all skin and subcutaneous adhesions. This resulted in partial correction of the torsion (Figure 2a; Figure 2b). Then, bilateral corporotomies were done with corporeal dilation and placement of 9.5 mm diameter, 18 cm long Genesis devices

**KEYWORDS:** Penile torsion; Erectile dysfunction; Prosthesis.

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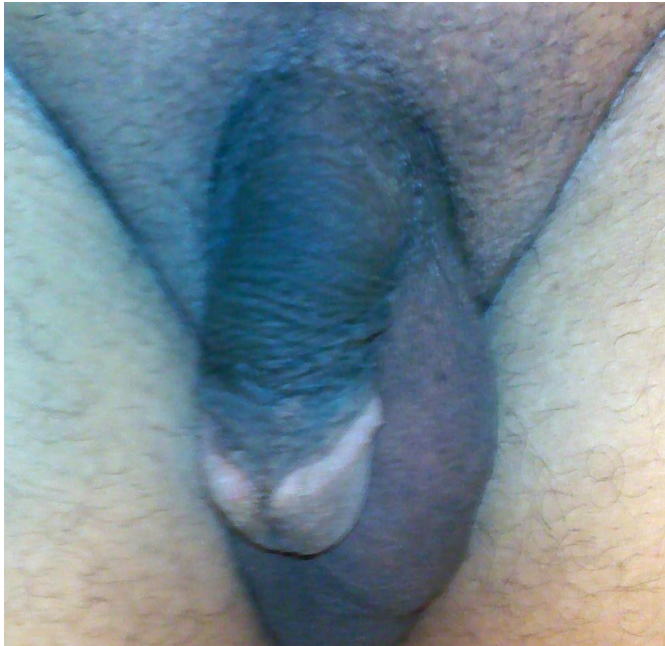
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#### Abbreviations and Acronyms

ED = erectile dysfunction

Figure 1. Preoperative Photograph Showing the 180 Degree Penile Torsion.

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(Mentor Corp; Santa Barbara, CA, USA). This procedure resulted in complete correction and closure of the wound with a drain inside (Figure 3a; Figure 3b).

The patient was followed for 6 months. He had an uneventful postoperative period and was doing well.

## DISCUSSION

There are few reports of penile torsion in the literature in the last 3 decades. In 2008, Shaer [4] studied the prevalence of congenital torsion in 12,307 patients attending 2 andrology clinics. Congenital torsion was present in 11.993% of the epidemiologic study group. It was categorized as mild in 80%, moderate in 15%, and severe in 5% of the cases. Only 2.2% of the patients were bothered by the condition. Shaer concluded that torsion of the penis is not uncommon, but rarely provokes a complaint.

The incidence of isolated penile torsion in neonates was studied by Sarkis and Sadasivam in 2007 [5]. The authors used a prospective survey that was conducted for all male newborns who were admitted to a nursery after delivery, and all neonates less than 3 months old who presented for circumcision. Cases with associated genital malformations were excluded. The authors reported that the incidence of isolated neonatal penile torsion was 27% (95% CI: 22.2%-31.84%). The torsion

Figure 2a. Intraoperative Photograph with the Semicorrected Torsion After Degloving.

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Figure 2b. Second Intraoperative View of the Semicorrected Torsion After Degloving.

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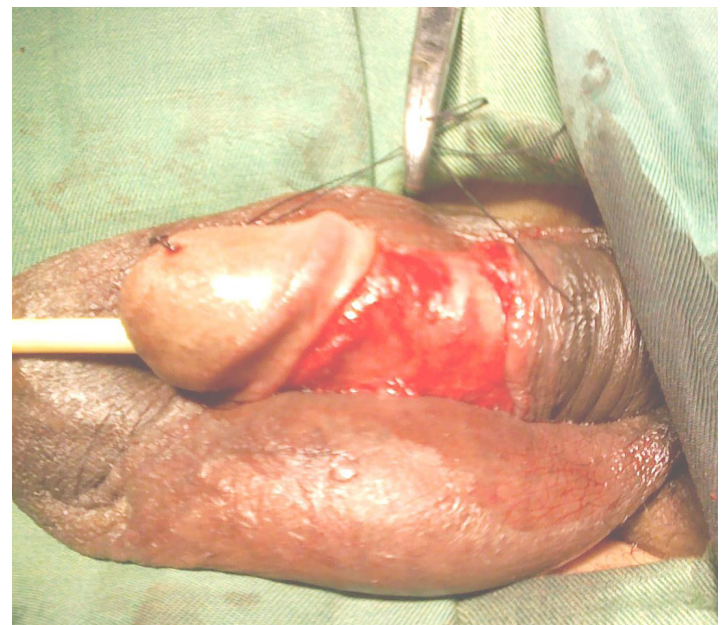


Figure 3a. Intraoperative Photograph With the Fully Corrected Torsion After Prosthesis Insertion, Left Side.

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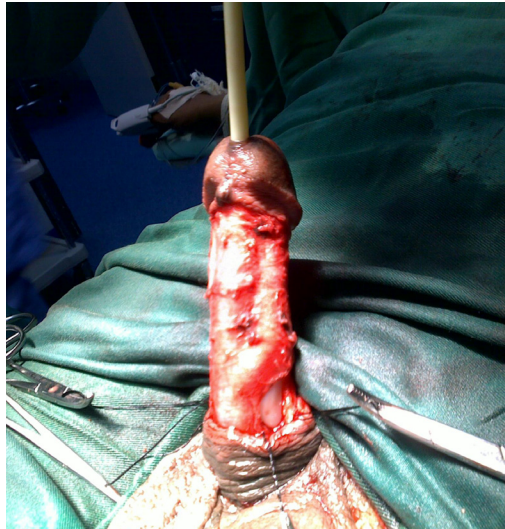


Figure 3b. Intraoperative Photograph With the Fully Corrected Torsion After Prosthesis Insertion, Right Side.

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presented to the left in 99% of cases. The penis had an angle < 10 degrees in 3.5% and > 20 degrees in 9.5% of the cases [5]. We can conclude from these studies that the incidence of penile torsion is not as uncommon as it might appear; rather, there may be few reported cases because the patient is rarely bothered enough to seek medical advice.

The etiology of penile torsion is not clear. Many authors believe that the main defect is abnormal skin attachment; additional presence of fibrous bands at the base of penis have been reported in some cases [6]. In 1981, Corriere [7] described Buck's fascia involvement in the etiology of congenital penile torsion. In 2006, Zhou et al [8], denied that abnormal skin attachment was a main factor in any case. They proposed an asymmetric development of the corpora cavernosa as the main etiological factor.

Penile degloving and skin reattachment were considered the main approaches for correction of penile torsion until the end of the last century. In the last decade, new techniques were introduced. In 2000, Belgrano et al [9] described a modified Nesbit procedure in which they performed asymmetric tunica albuginea excisions of ellipses. The technique was used to correct complex penile deformities (eg, torsion and curvature) in males whose ages ranged from 27-63 years. Shortening of the penis and decreased sensation were reported as complications in some cases. The modified Nesbit technique may be considered for complex cases in older males.

In 2004, Fisher and Park [10] described a dorsal dartos fascial flap that was sutured on the ventral aspect of the penis to correct 8 cases of penile torsion. This technique has the advantage of being an established step in the operation done for hypospadias. The dartos flap is used to cover the urethroplasty suture line. In 2006, Zhou et al [11] described the technique of suturing the lateral edge of the corpus cavernosum to the pubic periosteum. They performed this procedure on 11 boys with successful outcome. A comparison group of 6 boys with penile torsion received the technique of penile degloving and skin reattachment. The authors reported failure of correction in these 6 cases.

In the present case report, we faced a new situation where torsion was accompanied by severe ED. Penile degloving alone did not completely solve the problem. However, with the implantation of the penile prosthesis there was complete correction of the torsion. This technique is new and not previously reported. Its application is limited to special cases, but the results appear promising.

## CONCLUSION

Penile torsion accompanied by ED can be corrected by the combination of penile degloving and penile prosthesis implantation even in severe cases, provided that the patient is a candidate for prosthesis implantation.

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