

Trapped Penis: Report of Two Cases

Hapsolmuş Penis: İki Olguluk Vaka Raporu

Serhat Cetin, Firat Caglar Budak, Ozdemir Serhat Gurocak, Mustafa Ozgur Tan, Rafet Turgut Alkibay

Gazi University Faculty of Medicine, Department of Urology, Besevler, Ankara, Turkey

ABSTRACT

Trapped penis (TP) is a rare disease, most commonly seen after neonatal circumcision. It rarely occurs in adults. This disease requires medical or surgical treatment. In this case report, we present two cases (one child and one adult) who developed TP after circumcision.

Key Words: Trapped penis, adult, circumcision complication

Received: 12.27.2019

Accepted: 02.10.2020

ÖZET

Hapsolmuş pens genellikle yenidoğan sünneti sonrasında görülen nadir bir durumdur. Yetişkinlerde oldukça nadir görülür. Medikal veya cerrahi olarak tedavi gereklidir. Bu vaka raporunda birisi çocuk birisi yetişkin olmak üzere iki adet, sünnet sonrası gelişen hapsolmuş penis vakası bildirilmektedir.

Anahtar Sözcükler: Hapsolmuş penis, erişkin, sünnet komplikasyonu

Geliş Tarihi: 27.12.2019

Kabul Tarihi: 10.02.2020

ORCID IDs: S.C. 0000-0001-5450-5168, F.C.B. 0000-0003-0116-1212, M.O.T. 0000-0003-0943-3868, O.S.G. 0000-0003-2075-0098, R.T.A. 0000-0003-1240-3168

Address for Correspondence / Yazışma Adresi: Serhat Cetin, MD GÜTF Hastanesi, Emniyet Mahallesi Mevlana Bulvarı No:29 12. Kat Üroloji AD Yenimahalle, Ankara, Türkiye
E-mail: scetin86@yahoo.com

©Telif Hakkı 2020 Gazi Üniversitesi Tıp Fakültesi - Makale metnine <http://medicaljournal.gazi.edu.tr/> web adresinden ulaşılabilir.

©Copyright 2020 by Gazi University Medical Faculty - Available on-line at web site <http://medicaljournal.gazi.edu.tr/>

doi:<http://dx.doi.org/10.12996/gmj.2020.105>

INTRODUCTION

Circumcision is a surgical procedure that has been performed for about 6000 years. The 6000 year-old mummies have been shown to be circumcised(1). Today, it is the most common surgical procedure in men for both cultural and religious beliefs and medical reasons(2). Approximately 25% of the world's total male population is circumcised and circumcision remains one of the oldest and most common surgical procedures(3). Although frequently applied, the complication rate is reported as 0.2- 5%(4). Bleeding is the most common complication. Excessive removal of preputial skin can lead to an unsatisfactory cosmetic and functional disorder and is considered one of the main causes of the acquired TP (4). This requires medical or surgical treatment. In contrast, adult TP is much rarer, but there is a lack of knowledge on this subject(5). Excessively exaggerated circumcision (especially in newborns) or the routine circumcision of a buried penis can cause TP (6).

A TP is of normal size but is stuck in the prepubic fat or scrotum due to withdrawal and closure of the penile skin after circumcision. The TP may cause recurrent urinary tract infections, difficulty in urination, or even urinary retention in affected individuals, therefore treatment is necessary(5).

Adult TP management is a rare clinical condition that is difficult, because patients may have many ongoing urological problems. There may be local infection, skin loss, lower urinary tract symptoms or physical symptoms of painful erections due to limited enlargement of the corpus. In addition, many patients are psychologically disturbed by the appearance and functional condition of their penises. While the etiology and management of TP in pediatric and adolescent patients is well described, there is no standard treatment that has been universally accepted for adults with trapped penises until now(4). In this case report, we present two patients (one child and one adult) who developed TP after circumcision.

CASE REPORT*Case 1*

A 64-year-old male patient was admitted to the Urology department with inability to micturate. In the examination of the patient, an extremely TP with urinary retention and excessive inflamed penile skin on the glans were detected. In addition, the patient's urethral meatus could not be observed because preputial skin could not be retracted(Figure 1a).

Therefore, urinary catheterization could not be achieved. Percutaneous cystostomy catheter was inserted. In the patient's biochemical tests, creatine value was 2.6 mg/dL and ultrasonic examination showed bilateral grade 3 hydronephrosis. The patient was followed up for post-renal acute renal failure(ARF). According to the patient's history, it was learned that after circumcision at age 10, burial of the penis and difficulty in urination occurred in course of time. It has been learned that urination difficulty has increased in the last few years and urinary retention has occurred in the end. The patient who was married and had two children, did not have an erection problem at an early age, but later especially last five years had an erection problem due to the burial of the penis. The patient also had diabetes mellitus(DM). Serum creatinine value decreased to 1.3 mg / dL immediately after suprapubic diversion. Penile reconstruction surgery was performed following blood sugar regulation. Because of insufficient penis skin, reconstruction was performed with skin graft taken from the anterior aspect of the thigh(Figure 2a). Hydronephrosis was not observed in the urinary ultrasonography performed in the first week after the operation. On the 7th postoperative day, the patient's urethral catheter was removed and no signs were found in favor of obstruction in the uroflowmetry. On the pathological examination of the excised penis skin, fibrosis and perivascular minimal inflammation were observed.

Case 2

A 2-year-old male patient was admitted to our clinic by his family with the inability to retract the penis skin and with poor cosmetic image complaints. After circumcision performed 6 months ago, it was learned that the foreskin remained long and the skin opening on the glans closed in course of time. Physical examination revealed that the penis was edematous, inflamed and buried due to excess preputial tissue, and the prepuce could not be retracted(Figure 1 b). Biochemical and radiological analysis was normal. The patient was thought to have a TP and was operated for penile revision. Fibrotic band tissue remove technique was used for revision(Figure 2b).

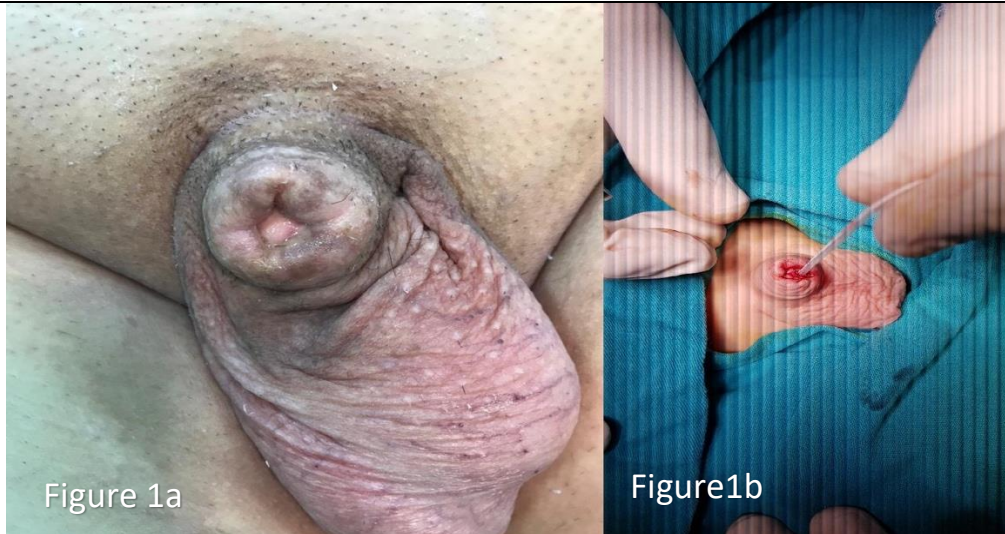


Figure 1(a): Preoperative photo of Case 1, 1(b): Preoperative photo of Case 2

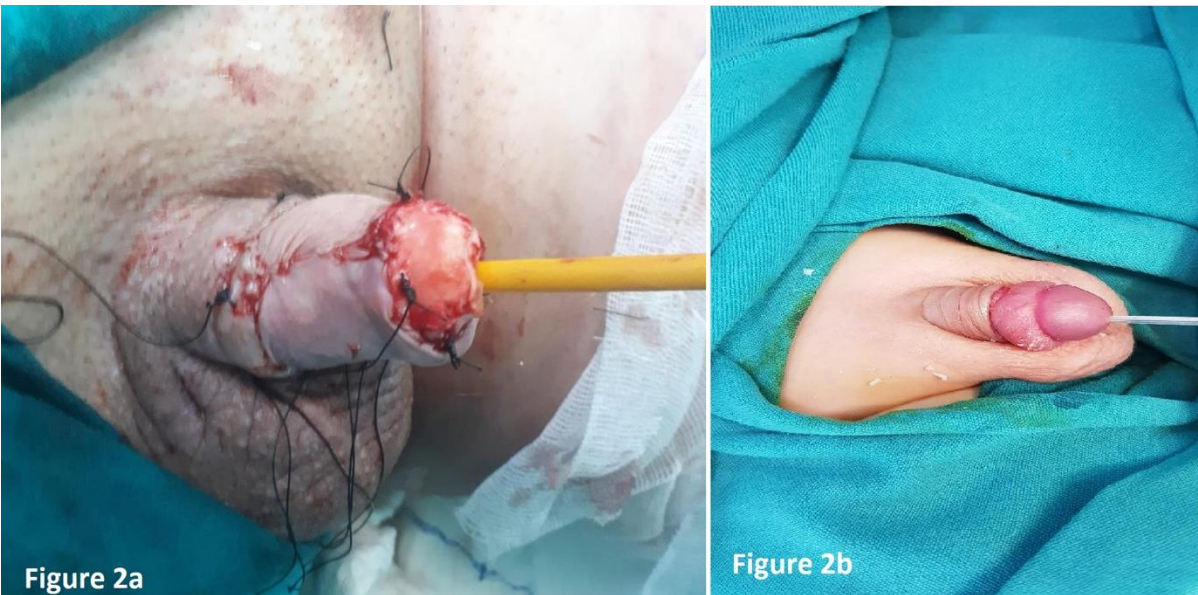


Figure 2(a): Intraoperative photo of Case 1, (b): Intraoperative photo of Case 2

DISCUSSION

The most common reason of TP in the literature is a circumcision that removes an excessive amount of skin from the penile shaft as well as the prepuce. The TP may also be the result of removing too little prepuce skin(7-10). In addition, we think that fibrosis has increased due to uncontrolled DM in Case-1, and urination and erection problems of the patient have increased gradually in recent years due to this fibrosis effect. The exact incidence of the TP developing after circumcision is unknown. In a series of 521 patients using Gomco circulation technique, 15 (2,9%) patients were reported to have TP during follow-up(11). In another series of 12355 patients circumcised with thermal-cautery technique, 48 (0.38%) patients were reported to have TP during follow-up(12).

The TP is a clinical entity that can be asymptomatic or cause serious problems such as renal failure. In a study by Abbas et al., it was reported that the most common reason for admission was poor cosmetic appearance (60%), followed by voiding problems (56.6%) and psychosocial anxiety (50.5%)(13). One of the two patients in our study presented with ARF due to post-vesical obstruction, while the other presented with poor cosmetic appearance.

Young children with secondary cicatricial scarring after penile surgery can be managed with forceful dilation of the cicatrix with a fine hemostat in the office after the application or injection of analgesic(4). Another treatment option is topical betamethasone and manual retraction; in a series of 14 patients, this combination has been shown to reduce the need for major surgery by 78.5%(7). In another opinion, patients and families are worried about the possibility of complications and the penis becoming more tight with time; therefore, surgery can be performed at the time of diagnosis(9, 14, 15). Surgical alternatives include vertical incision to cicatrix or reconstruction of the penis(10). In moderately severe cases the fibrotic bands of tissue, which are located on the dorsal surface of the shaft of penis, must be removed. The prepuce should be used for ventral skin coverage(4). Penoscrotal Z-plasty, lateral penile shaft Z-plasty, island pedicle of ventral preputial skin or skin graft techniques may be used in more severe cases where there is not enough penis skin(16, 17). In our cases, we used skin graft technique for first case because of there was not enough penile skin for reconstruction, and we used dysgenic tissue remove technique for second case. No problem was observed in both patients in terms of cosmetic and functional aspects during follow-up.

Conflict of interest

No conflict of interest was declared by the authors.

REFERENCES

1. Rizvi, S., et al., Religious circumcision: a Muslim view. *BJU international*, 1999; 83:13-6.
2. Özdemir, T., et al., Secondary phimosis after circumcision. *Turkish journal of urology*, 2019;45:135.
3. Asimakopoulos, A.D., et al., Surgery Illustrated—Focus on Details Autologous split—thickness skin graft for penile coverage in the treatment of buried (trapped) penis after radical circumcision. *BJU international*, 2012;110: 602-6.
4. Palmer, L. and J. Palmer, Management of abnormalities of the external genitalia in boys. *Campbell-Walsh Urology*. 11th ed. Philadelphia, PA: Elsevier, 2016: p. 3368-98.
5. Higuchi, T.T., et al., Evaluation and treatment of adult concealed penis. *Current urology reports*, 2012;13: 277-84.
6. Cimador, M., et al., The inconspicuous penis in children. *Nature Reviews Urology*, 2015;12:205.
7. Palmer, J.S., J.S. Elder, and L.S. Palmer, The use of betamethasone to manage the trapped penis following neonatal circumcision. *The Journal of urology*, 2005;174:1577-8.
8. Bergeson PS, Hopkin RJ, Bailey RB Jr, McGill LC, Piatt JP. The inconspicuous penis. *Pediatrics*. 1993;92:794-9.
9. Casale, A.J., et al., Concealed penis in childhood: a spectrum of etiology and treatment. *The Journal of urology*, 1999; 162(3 Part 2): 1165-8.
10. Elbatarny, A.M., Surgical treatment of postcircumcision trapped penis. *Annals of Pediatric Surgery*, 2014; 10: 119-24.
11. Blalock, H.J., et al., Outpatient management of phimosis following newborn circumcision. *The Journal of urology*, 2003; 169: 2332-4.
12. Akyüz, O., M. Bodakçı, and A. Tefekli, Thermal cautery-assisted circumcision and principles of its use to decrease complication rates. *Journal of pediatric urology*, 2019;15:186. e1-186. e8.
13. Abbas, M., et al., Outcome of surgical management of concealed penis. *Journal of pediatric urology*, 2007; 3: 490-4.
14. Radhakrishnan, J., A. Razzaq, and K. Manickam, Concealed penis. *Pediatric surgery international*, 2002; 18: 668-72.
15. Levitt, S.B., R.B. Smith, and A.G. Ship, Iatrogenic microphallus secondary to circumcision. *Urology*, 1976; 8: 472-4.
16. Shenoy, M., et al., Buried penis: surgical correction using liposuction and realignment of skin. *BJU international*, 2000;86:527-30.
17. Maizels, M., et al., Surgical correction of the buried penis: description of a classification system and a technique to correct the disorder. *The Journal of urology*, 1986;136(1 Part 2): 268-71.