

A Complication in Hypospadias Surgery Due to Anchoring Suture

Hipospadiyas Cerrahisinde Askı Dikişine Bağlı Gelişen Komplikasyon

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Abstract

The complication rates are still 1-90% both in proximal and distal hypospadias regardless of the surgeon's experience and the usage of most developed techniques. The literature survey revealed few complications of glans penis including meatal stenosis, prolapsus and retraction. Despite our literature survey, we could not find any article concerning the permanent scar tissue at the dorsal part of glans following hypospadias surgeries. A new complication can be added to these, concerning glans which is the formation of postoperative scar tissue as a reaction to suture material used in traction, stent anchoring or both. The aim of this paper is to demonstrate four cases which had glanular scar due to traction suture following the surgical procedures for hypospadias repair.

Keywords: Children, complication, glans penis, hypospadias, scar

Özet

Proksimal ve distal hipospadiyas onarımlarında cerrahın deneyimi ve kullanılan tekniklerdeki gelişmeye karşın komplikasyon oranı hala %1-90 arasında değişmektedir. Literatüre bakıldığında; glans penis ile ilgili meatal darlık, prolapsus ve retraksiyonu içeren az sayıda komplikasyondan söz edilmiştir. Yapılan taramada; hipospadiyas cerrahisi sonrasında tanımlanmış glansın dorsal kısmı ile ilgili herhangi bir yayına rastlanmadı. Glansda askı, stentin tesbitlenmesi ya da her ikisinin kullanımı nedeni ile glansdan geçilen rekraksiyon dikişine bağlı gelişen ameliyat sonrası skar bu komplikasyonlara eklenir. Bu çalışmanın amacı; hipospadiyas cerrahisi sırasında kullanılan askı dikişine bağlı glansda skar gelişen dört hastanın sunulmasıdır.

Anahtar Kelimeler: Çocuk, glans penis, hipospadiyas, komplikasyon, skar

Introduction

Hypospadias occurs one in 300 births [1, 2]. There are more than 250 manuscripts published in a year concerning this common congenital anomaly and more than 400 techniques have been described [2].

The complication rates are still 1-90% both in proximal and distal hypospadias regardless of the surgeon's experience and the usage of most developed techniques [2]. These complications involve wound dehiscence, infection, fistula, stenosis, bleeding, residual chordee, flap and skin necrosis, and torsion [1, 2]. The complications are mostly related with neourethra. The literature survey revealed few complications of glans penis including meatal stenosis, prolapsus and retraction. Despite our literature survey, we could not find any article concerning the permanent scar tissue at the dorsal part of glans following hypospadias surgeries. The aim of this paper is to demonstrate four cases which had glanular scar

due to sutures following surgical procedures for hypospadias repair.

Case Reports

Case 1

Five-year old boy who had penoscrotal hypospadias was firstly operated in our department for chordee release which was followed by tubularised incised plate urethroplasty. One year later, the operation was planned for repairing the developed fistula. Physical examination revealed a transverse scar on the dorsal face of the glans. We assume that this scar occurred because of silk suture which passed through glans in the earlier operations for traction and/or stent anchoring. There were papillary projections at the dorsum of glans penis (Figure 1a). We think that these are granulation tissues following the healing of glans where traction or stent anchoring suture was passed. Fistula repair was performed and the

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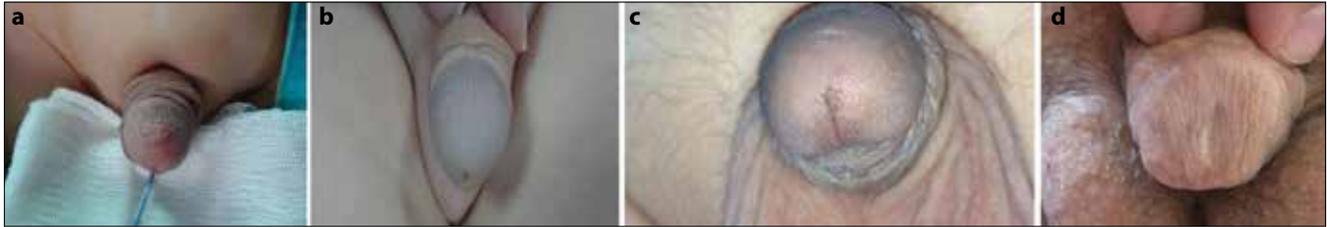


Figure 1. a-d. Appearance of the scar tissue on the glans of Case 1 (a), appearance of the scar tissue on the glans of Case 2 (b), appearance of the scar tissue on the glans of Case 3 (c), appearance of the scar tissue on the glans of Case 4 (d).

patient is doing well six months after the surgery. Informed consent was received from the parents for publication and photograph.

Case 2

A boy with coronal hypospadias was undergone tubularised incised plate urethroplasty when he was 18 months old in our department. During the operation a transverse suture with silk was passed from dorsal part of glans. In his follow-up, there was a transverse scar on this part of the glans (Figure 1b). Informed consent was received from the parents for publication and photograph.

Case 3

A ten-year old boy who had a history of hypospadias repair in another centre at the age of five was admitted to hospital because of acute appendicitis. In his physical examination, there was a transverse scar on the dorsal part of the glans (Figure 1c). The type of suture material used for traction five years ago during hypospadias repair is unknown. Informed consent was received from the parents for publication and photograph.

Case 4

Sixteen-year old boy who had penoscrotal hypospadias had experienced three operations for total correction in our department. After the first operation glanular transverse scar tissue due to 4/0 silk traction suture was observed (Figure 1d). Informed consent was received from the parents for publication and photograph.

Discussion

Complication rates are still relatively high following the hypospadias surgery. The aim is to present four cases which had scarred tissue at the glans suture site which has not been discussed thoroughly in the literature.

Complications described in the literature are acute and chronic. Acute complications include bleeding, hematoma, oedema, infection, wound dehiscence, skin or flap necrosis, fistula, penile torsion, penile erection, inadvertent removal of

urethral stent and bladder spasm [3]. Chronic complications can be classified as occurring in the skin or penile shaft, urethral, glanular and other.

Skin complications involve dehiscence, infection, skin irregularities, flap or skin necrosis, skin bridges, iatrogenic burn scars because of cautery, remaining of extra skin tissue and skin sloughing. Complications concerning urethra involve urethrocele, fistula, hair bearing urethra and stenosis. Torsion and residual chordee can be listed as complications of penile shaft. Balanitis xerotica obliterans, meatal stenosis, prolapsus, retraction, tissue defect, glans necrosis, glans dehiscence, figure distractions are the reported complications of glans penis. Other complications are vesicosphincteric dyssynergy, bad cosmesis and urinary flow disorders [1-5].

A new complication can be added to these, concerning the glans which is the formation of postoperative scar tissue as a reaction to suture material used in traction, stent anchoring or both. Literature survey revealed the use of suture passing through glans for stent anchoring or traction. However there are not any detailed explanations about these sutures. These are the only cases with this complication in our department (60-70 hypospadias surgery in a year) and all of them had scar in transverse plan therefore we have changed our technique and began to use vertical or preputial anchoring suture. The children who had vertical anchoring suture, has no scar formation in this plan.

Traction suture passing through glans penis is usually used. A group of surgeons use this traction suture for stent anchoring as well. In our department traction sutures are usually passed through preputial skin only in stents but not used in foley catheters. If suture is required it should be passed vertically at the tip of glans. Although scar formation is less in glans and blood supply is good, cosmetic complications can be seen following operations such as skin bridge, balanitis xerotica obliterans, dermabrasion, tissue defect, glans amputation, iatrogenic burn scars secondary to cautery.

In these cases although the cause was anchoring suture, the reason of scar formation may be because of the suture material, needle calibration, infection or an abnormality in tissue healing. Besides, type of suture material and duration of suture also affect the scar formation. The reason of the rare

discussion about this issue may be due to the usage of different techniques by the surgeons and personal preferences about using catheters. If anchoring is required, it could be done by using tapes or thinner materials other than silk or anchoring through preputium.

Informed Consent: Informed consents were obtained from the parents of the patients for publication and photographs.

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