



African Journal of Urology

Official journal of the Pan African Urological Surgeons' Association
web page of the journal

www.ees.elsevier.com/afju
www.sciencedirect.com



Reconstructive Urology

Original Article

Tubularized incised plate urethroplasty repair in adult hypospadias patients. Are results similar to those reported in the pediatric age group? A prospective study



A. Bhat*, M. Bhat, R. Upadhaya, V. Kumar, R. Kumar, R. Mittal

Department of Urology, S.P. Medical College Bikaner, Rajasthan 334003, India

Received 5 November 2014; received in revised form 23 March 2015; accepted 1st April 2015

Available online 5 March 2016

KEYWORDS

TIPU;
Hypospadias;
Repair;
Results;
Adults;
Pediatric;
Variable;
Chordee;
Type of hypospadias;
Spongiosum urethral plate

Abstract

Objective: Most studies published in the literature report on the results of tubularized incised plate urethroplasty (TIPU) for hypospadias repair in children. Hence, the objective of this study was to evaluate the results of TIPU repair in adults.

Patients and methods: The records of 60 adult patients with primary hypospadias treated with TIPU between April 2009 and May 2012 were reviewed. All the procedures were done by the same surgeon under similar conditions and using the same kind of instruments and suture material. On clinical examination, the meatal location, as well as the presence/absence of chordee and penile torsion was assessed. The quality of the spongiosum and the width of the urethral plate were evaluated intraoperatively. The postoperative complications and results were recorded and the data were analyzed.

Results: The patients' age ranged from 16 to 27 years with a mean of 21 years. Out of the 60 cases, 43 (72%) had distal penile, 7 (11%) mid-penile and 10 (17%) proximal hypospadias. Penile torsion was present in 10 (17%) cases with 80% having a torsion $\leq 45^\circ$ and 20% having a torsion of $45-90^\circ$. Ventral chordee ranging from 30° to 90° was present in 14 (23%) cases. Chordee correction was possible by penile de-gloving in 4 (29%) patients (2 with distal and 2 with mid-penile hypospadias), by further mobilization of the urethral plate with the corpus spongiosum in 3 (21%) and by proximal urethral mobilization in another 6 (42%) patients with proximal hypospadias. One (7%) patient also required tunica albuginea plication. The urethral plate was wide in 22 (37%), average in 26 (43%) and narrow in 12 (20%) patients. Fifty percent of the patients with a narrow urethral plate developed complications, compared to 15% of the patients whose

* Corresponding author at: C-15 Sadul Ganj, Bikaner, Rajasthan 334003, India.

E-mail addresses: amilalbhat@rediffmail.com (A. Bhat), mahak199027@gmail.com (M. Bhat), surgeon.ups@gmail.com (R. Upadhaya), vinaysinghkgmc99@gmail.com (V. Kumar), drrajeevkr2k@gmail.com (R. Kumar), drruchimittalms@gmail.com (R. Mittal).

Peer review under responsibility of Pan African Urological Surgeons' Association.

<http://dx.doi.org/10.1016/j.afju.2015.04.007>

1110-5704/© 2016 Pan African Urological Surgeons' Association. Production and hosting by Elsevier B.V. All rights reserved.

urethral plate had an average width and none of the patients with a wide urethral plate. The spongiosum was well developed in 38 (63%) patients, while in 11 (18%) patients each the spongiosum was moderately and poorly developed. The complication rates were significantly higher (55%) in patients with a poorly developed spongiosum as compared to those with a well-developed spongiosum. The overall complication rate was 17% including fistula in 10% of the patients (2 patients with mid-penile and 4 patients with proximal hypospadias). Meatal stenosis was found in 4 patients with distal hypospadias (7%) who responded well to meatal dilatation. The fistula cases required surgical repair with a success rate of 100%. Mean hospitalization and follow-up were 9 days and 6–24 (median 37) months, respectively.

Conclusions: Complications encountered in the present study were urethral fistula and meatal stenosis with a higher incidence in patients with proximal hypospadias than reported in the literature. The important factors for the outcome of TIPU were the severity of hypospadias, the degree of curvature and the development of the spongiosum and urethral plate. Proximal hypospadias with a poor urethral plate and severe curvature in adults is not suitable for TIPU. In such cases, single-stage flap urethroplasty or two-stage buccal mucosal urethroplasty should be considered instead.

© 2016 Pan African Urological Surgeons' Association. Production and hosting by Elsevier B.V. All rights reserved.

Introduction

Tubularized incised plate urethroplasty (TIPU) is most commonly used for primary and re-do repair of distal, but also increasingly of proximal hypospadias in adults with good results [1,2]. Age is one of the important variables determining the outcome of surgical repair. The American Academy of Pediatrics recommends operating hypospadias at the age of 6–12 months [3]. In developed countries, children are taken to the hospital at a pediatric age suitable for surgery. However in developing countries, home births are still commonplace, mostly with the parents lacking awareness of congenital anomalies. Illiteracy and ignorance are among the most important reasons why patients with hypospadias present late to the hospital, mostly after the age of 2, and a significant number even in late childhood or as adults [4]. The few retrospective studies in the literature on the outcome of hypospadias repair in adults report a higher complication rate in older patients as compared to pediatric patients [5–7]. Adult hypospadias patients have been found to have erectile problems, a clearly increased susceptibility to infection, decreased vascularity, and wound healing problems, leading to further complications. There are no prospective studies on the outcome of TIPU in adults. Thus, the purpose of this study was to evaluate the results of TIPU repair in adults with reference to complications and the factors affecting the results.

Patients and methods

The records of 60 adult patients subjected to TIPU repair for hypospadias between April 2009 and May 2012 were reviewed. Only patients above the age of 16 with primary hypospadias who attended four follow-up visits after the intervention were included in the study. Care was also taken to select patients with the same socioeconomic background. Patients with secondary hypospadias and patients in whom a transection of the urethral plate had been done were excluded.

On clinical examination, the meatal location, as well as the presence/absence of chordee and penile torsion was assessed. The quality of the spongiosum and the width of the urethral plate were evaluated intraoperatively.

The quality of the spongiosum was classified as follows:

1. Poorly developed: Thin spongiosum with decreased vascularity. After tubularization, the diameter of the neourethra covered by the spongiosum was smaller than that of the proximal healthy urethra.
2. Moderately developed: Spongiosum with average thickness and vascularity. After tubularization, the diameter of the neourethra covered by the spongiosum was almost equal to that of the proximal healthy urethra.
3. Well developed: Robust, thick spongiosum with good vascularity. After tubularization, the diameter of the neourethra covered by the spongiosum was greater than that of the proximal healthy urethra [8,9].

We did not find any generally accepted objective criteria to define the normal width of the urethral plate. When the urethral plate could be tubularized easily without incision (on the largest catheter accepted by the normal proximal urethra), it was considered to be wide. When it required a superficial incision for this purpose, it was considered to be average, and when it required a deep incision of the plate, then it was considered to be narrow [8,9].

The degree of ventral curvature and torsion was also re-assessed intraoperatively before penile de-gloving. All patients included in the study were operated by the same surgeon under similar conditions and using the same kind of instruments and suture material.

Surgical technique

A V-shaped incision was chosen in cases without chordee or torsion requiring preputioplasty. In the remaining patients, an incision in inverted U-shape encircling the meatus up to the corona (preserving the urethral plate) was done and then continued circumferentially around the corona. Later on, the urethral plate and corpus spongiosum were mobilized in all cases. Penile de-gloving was done in cases with ventral curvature and/or penile torsion. The Gitte's test (intra-corporeal saline injection and simulated erection) was performed

Download English Version:

<https://daneshyari.com/en/article/4267513>

Download Persian Version:

<https://daneshyari.com/article/4267513>

[Daneshyari.com](https://daneshyari.com)