



African Journal of Urology

Official journal of the Pan African Urological Surgeon's Association
web page of the journal

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



Original article

Should primary realignment become the standard line of treatment for traumatic posterior and bulbar urethral disruption?

A. Elkady, M. Abd El Hamid*, Mohamed A. Abdel-Rassoul, M. El Ghoneimy, H. Badawy

Kasr Al Ainy Urology Department, Cairo University, Cairo, Egypt

Received 5 January 2018; received in revised form 10 May 2018; accepted 27 May 2018

Available online xxx

KEYWORDS

Realignment;
Endoscopic;
Posterior urethra;
Traumatic disruption

Abstract

Objectives: To assess early urethral realignment and the correlation of severity of pelvic fracture, with impact of technique on continence and potency.

Methods: Prospective analysis on patients of post traumatic urethral disruption from 7/2013–5/2015 at Cairo University hospitals. Initial management entailed suprapubic tube insertion. Antegrade flexible cystoscopy or rigid ureteroscopy via the suprapubic access, together with retrograde rigid cystoscopy and real-time fluoroscopy. Follow up entailed history taking, uroflowmetry, urethrograms, cystoscopy, success rate, continence, erectile status after trauma and need for auxiliary procedures after catheter removal.

Results: A total of 18 men with a mean age of 27 ± 15 years. Endoscopic realignment (ER) was performed in 15 out of 18 patients. Open realignment was done in 3 cases. Mean OR time for ER was 30 ± 22 min. Estimated blood loss was minimal. Mean time from injury to primary realignment was 6.0 ± 3.8 days. We found a good correlation between presence of pelvic fracture and grade of urethral injury, but no correlation was found between Tile class and grade of urethral injury. A total of 9 (56.3%) out of 16 patients, who completed follow-up developed 2ry strictures. 6 had narrowing of the urethra and underwent DVIU; 2 of whom had recurrent stricture and needed urethroplasty. 3 had complete obliteration of the urethral lumen and definitive urethroplasty was done. Mean follow up duration 20.6 ± 5.3 months. No patient suffered from UI and only 1 out of 13 adult patients who completed follow up (7.7%) suffered ED.

Conclusions: Early urethral realignment is successful due to advances in endoscopic techniques.

© 2018 Pan African Urological Surgeons Association. Production and hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

* Corresponding author.

E-mail address: Mahmoud.abdelhamid@kasralainy.edu.eg (M. Abd El Hamid).

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

<https://doi.org/10.1016/j.afju.2018.05.004>

1110-5704/© 2018 Pan African Urological Surgeons Association. Production and hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Introduction

There is still no overwhelming agreement over the ideal management for traumatic posterior urethral disruption. Though a lot of published reports over the last decade have shown the benefits of early urethral realignment, yet still many centers advocate the use of suprapubic cystostomy, with delayed urethral reconstruction [1,2]; mainly being driven by prior studies raising concerns over the impact of early urethral manipulation on the rates of urinary incontinence and impotence later on [3–5]. However, almost 100% of patients treated with suprapubic cystostomy develop strictures [6]; while early urethral realignment has been found to spare at least half of these patients from the need for urethroplasty [6–10].

Our aim with this prospective study was to confirm the results of the previously published series regarding the success of primary realignment following traumatic posterior and bulbar urethral injuries and to assess the incidence of strictures following catheter removal, the necessary treatment and the extent of difficulty of such treatment. We also aimed to record the incidence of incontinence or impotence in such group of patients, and whether they required any ancillary treatment.

Patients and methods

Between July 2013 and May 2015, all patients with traumatic posterior, and bulbar urethral injuries presenting at Cairo University hospitals were included in this study. Upon clinical suspicion of urethral injury, a retrograde urethrogram was performed in the emergency suite to confirm the diagnosis. A suprapubic cystostomy was then fixed for bladder drainage. Urethral realignment was delayed in cases of hemodynamic instability or life-threatening injuries that precluded urologic manipulation. Only patients who remained vitally unstable in spite of proper resuscitation and management of associated orthopedic or surgical complications were excluded from the study. Urethral injuries were classified according to the Organ injury scaling III classification proposed by the American Association for Surgery of Trauma (AAST) [11]. Primary urethral realignment was done within 15 days following trauma according to whenever the patient was deemed to be stable to undergo the procedure. Realignment was done usually endoscopically, apart from few special circumstances where the open (rail-roading) technique was used. Endoscopic realignment was done using either a flexible cystoscope or a semi-rigid ureteroscope, that was passed through the cystostomy tract into the bladder neck and posterior urethra down to the rupture site. The endoscopes used were the Cystoscope 30° lens and 21 Fr sheath, the ureteroscope used was the semirigid 9–11.5 Fr STORZ. A 0.35" straight guide wire was then passed under fluoroscopic guidance to be seen by a retrograde urethroscope passed simultaneously through the urethra up to the rupture site. The wire was grasped with a forceps, and pulled out through the urethral meatus. A 16 french silicon Foley's catheter with a small opening made in its tip to admit the guide wire. The catheter was then passed over this guide wire into the urinary bladder [7]. Pediatric scope and working elements and smaller sized catheters were used in the pediatric patients.

The procedure was considered a failure if realignment could not be done by the endoscopic technique and there was no other indication for exploration. Open realignment was done only in three cases; two cases were explored for concomitant bladder and rectal

injury in one and the need for internal bone fixation in another. In the third case the suprapubic catheter slipped 24 h following its fixation and the suprapubic access was lost and an associated bladder injury precluded bladder filling. In these three cases the bladder was [7] subsequently opened and a Nelaton catheter was passed gently through the bladder neck into the urethra and across the defect to be pulled out through the urethral meatus. This catheter was tied to a silicone Foley catheter and then pulled back into the bladder to guide the silicone catheter bridging the injury site. Both the suprapubic tube and the urethral catheter were left in place for a varying period of 4–6 weeks.

A voiding cystourethrogram was performed when the urethral catheter was removed to ensure urethral patency and then the suprapubic catheter was removed. Uroflowmetry and post-void residual urine volume were done then, a week later and at 3, 6 and 12 months. The urine flow was considered good when maximum flow rate was greater than 15 ml/s and with a bell shaped curve. Urethrogram was done in case of obstructive complains with a decreased flow rate or increased post-voiding residual urine. Direct Visual internal urethrotomy (DVIU) was done in cases with evidence of urethral stricture, less than 2 cm. Urethroplasty was done for cases with completely obliterative strictures, long segment strictures or recurring strictures after DVIU. Primary realignment was considered successful if the patient could void well with no need for further interventions.

Post operative urinary incontinence and erectile dysfunction were assessed through direct patient interview on follow up visits at the outpatient clinic. Urinary incontinence was defined as the need to wear pads to protect against urinary leakage. Erectile function was determined by International Index of Erectile Function (IIEF-5) Questionnaire.

In cases with pelvic fracture, the type of fracture was determined according to "Tile classification" to assess if there was any correlation between the type of pelvic fracture and the severity of the associated urethral injury.

Data analysis was performed using SigmaStat program 3.5 (Systat Software, Inc., USA). Comparisons between variables of two groups was done using the Student's unpaired *t*-test for parametric data or the Mann-Whitney Rank Sum test for non-parametric data. Comparing categorical variables was done by Chi-square test or Fisher exact test for small sample size. Correlations between various variables were done using Spearman test for non linear relations. All P-values were two tailed and considered significant when P-values less than 0.05.

Results

A total of 18 patients with traumatic posterior urethral disruption secondary to blunt pelvic trauma were enrolled during this study. Their mean age was 27.4 years (median 28 and range 6–73 years). The mechanism of injury was motor car accident in 11, fall from a height in 3, crush injury in 2 and falling astride in 2 patients. Fourteen patients (77.8%) had pelvic fractures. The type, Tile classification and management of pelvic fractures are illustrated in Table 1.

A retrograde urethrogram done in the emergency suite revealed prostatic-membranous urethral disruption in 15 patients and a bulbar urethral tear in 3 patients.

Download English Version:

<https://daneshyari.com/en/article/11008260>

Download Persian Version:

<https://daneshyari.com/article/11008260>

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