An Audit of Management of Different Urethral Pathologies at a Public Sector Tertiary Care Setup

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Introduction

Urethral stricture represents a significant portion of the workload in urology at JPMC, accounting for approximately 4-5% of cases. One of the leading causes of urethral stricture and disruption is RTA. The methods used to manage this condition include urethral dilatation, DVIU and urethroplasty. Unfortunately, many patients with recurrent strictures often undergo multiple urethrotomies, despite the low success rate associated with this approach. Urethral stricture disease predominantly affects males, and the management of this condition has evolved over time from routine dilatation and DVIU to the now preferred intervention urethroplasty. We conducted an assessment of the various urethral pathologies that required surgical intervention in our department, including an evaluation of the success and failure rates of each procedure.

Aim

To determine outcome of different management strategies for urethral pathologies, both congenital and acquired at a single tertiary care center in Pakistan.

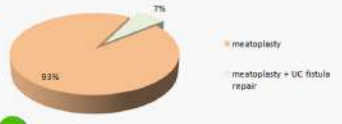
Materials & Methods

All consecutive patients who underwent various types of surgical interventions for urethral pathologies at Department of Urological Surgery and Transplantation in Jinnah JPMC, from January 2018 to June 2023 were included in this study. Short-term success rate, complications and need for redo procedures were noted. Data was retrieved from the patients' case files and analyzed on SPSS version 26.0

Results

Meatal Stenosis
15 patients (2.87%)

14 patients with meatal stenosis were treated with meatoplasty. 1 patient with meatal stenosis along with distal penile urethrocutaneous fistula was treated with meatoplasty, glanuloplaty and primary repair of fistula.



2 patients required serial dilatation fro some time post procedure.

Female Hypospadias
1 patient (0.19%)

1 female patient with hypospadias was treated with pimary repair.

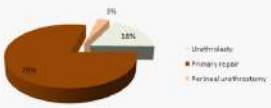
Epispadias
5 patients (0.95%)

4 patients were treated with staged BRACKA repair and 1 paitent underwent urethroplasty alongwith UC fistula repair.

Success rate was 100%.

Fistulas
28 patients (5.63%)

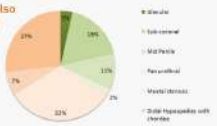
18 patients presented with urethrocutaneous fistulas, 2 patients presented with rectaurethral and urethrovaginal fistula each and 1 presented with congenital anterior urethrocutaneous fistula. Among them 22 (78.57%) underwent primary repair, 5 (17.8%) patients were managed with urethroplasty and 1 paitnet with perineal urethrostomy.

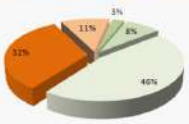


Success rate was 96%. 2 patients presented wih wound dehiscence and had to undergo redo procedure.

Distal Hypospadias
32 patients (6.13%)

2 patients with glanular, 10 with sub-coronal, 7 with mid penile, and 18 were also with meatal stenosis. 4 patients with distal hypospadias were with associated chordee and 15 were without any chordee,
22 patients were managed with staged bRACKA repair, 4 underwent chordee correction along with urethroplasty, 3 patients had glanuloplasty, 2 had meatoplasty and 1 was manged with perineal urethrostomy.

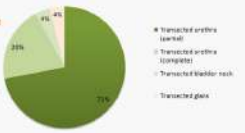




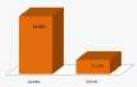
Success rate was 89.19%. 1 patient needed redo urethroplasty, whereas, 3 patients were managed with DVIU alone.

Trauma
25 patients (4.78%)

18 patients presented with partially transected urethra, 5 patients were with complete urethral transection, 1 patient was with complete horizontal bladder neck transection and 1 patient was with transected glans.



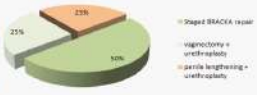
8 patients were managed with catheterization under vision, 15 patients with urethral re-alignement, bladder neck transection was managed with early repair and penile reconstruction was done fro transected glans.



4 patients presented with urethral strictures in follow up years. 1 with complete stricture was managed with EPA and 3 patients were managed with DVIU.

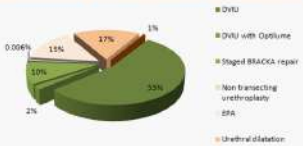
Disorders of Sexual Differentiation
8 patients (1.53%)

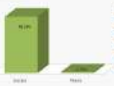
4 patients of DSD had staged BRACKA repair, 2 underwent vaginectomy with urethroplasty and 2 underwent penile lengthening with urethroplasty.
No patient presented with post op complications.



Urethral Strictures
312 patients (59.77%)

294 patients secondary to trauma/infective etiology, 5 patients with post instrumentation strictures and 3 patietns with recurrent strictures; of which 171 were managed with DVIU alone and 6 patients with DVIU with optilume, whereas, 80 patients required urethroplasty for the management. Among them 32 patients underwent staged BRACKA repair, 2 patients underwent non transectign urethroplasty and 46 patients had EPA.
53 patients were managed with urethral dilatation and 2 patietns who were deemed unfit for surgery underwent suprapubic cystostomy.





DVIU for management of urethral strictures presented very promising results. Success rate was almost 98.24% (168/171) and only 1.75% (3/174) needed redo procedure.

DVIU with optilume did not have good success rate. Failure rate was 66.66% 4/6 patients presennted with no significant improvement.

Urethroplasty, both staged repair and EPA had outstanding success rate of 98.24%. Only 3 patients presented with failure. 2 of them needed redo urethroplasty and 1 was managed with DVIU.

Patients with partial strcitures were managed with dilatation with good outcome.
17 patients (30.9%) requrired procedure more than once.

Proximal Hypospadias
96 patients (18.39%)

Patients with proximal hypospadias including perineal, peno scrotal and proximal penile hypospadias were managed with chordee correction and urethroplasty (26), staged BRACKA repair (96) and glanuloplasty (3).

Success rate was 92.71% .
3 patient needed redo urethroplasty, 2 patient presented with graft failure/ open wound and 2 patients neded DVIU for post urethroplasty partial stricture.