Efficacy of Intracorporeal Mitomycin C Hydrogel in Prevention from Anterior Urethral Stricture Recurrence After Internal Urethroplasty

Moradi M1, Kamran B2, Derakhshandeh K3, Fashi M2, Samadzadeh B3, Bardideh A3
1Division of Urology, Urology-Nephrology Research Center, Kermanshah University of Medical Sciences, Imam Reza General Hospital, Kermanshah, Iran; 2Dept. of Pharmacology, Kermanshah University of Medical Sciences, Kermanshah, Iran; 3Renal Transplantation, Kermanshah University of Medical Sciences, Imam Reza General Hospital, Kermanshah, Iran

Introduction and Objective: Studying efficacy of intracorporeal MMC hydrogel in prevention from anterior urethral stricture recurrence after internal urethroplasty in men.

Materials and Methods: A mixture of 0.8 mg MMC with 1cc water and propylene glycol was added to pf-127 poloxamer 0.8 mg MMC with 1cc water and propyl-gene glycol was added to pf-127 poloxamer

Results: Both groups (control & MMC) were matched respecting factors of age and length of stricture. Stricture length varied between 2 cm to 25 cm. In comparison between two groups no statistically meaningful difference was noted (P = 0.574). History of previous internal urethroplasty existed in 15 patients. In comparison between two groups there was no meaningful difference (P = 0.327). Urethral stricture recurrence happened in 12 patients (50%). In comparison between two groups, in control group there were 2 patients (30%). In comparison between two groups, patients and in case group just 1 patient (8.3% of total recurrences) and in case group just 1 patient (8.3% of total recurrences). The difference was statistically significant. (P = 0.001). Cases of resurgery (internal urethroplasty) during study happened in 5 patients. In comparison between two groups a significant difference existed (P = 0.151). Eight patients who, due to stricture recurrence, were assigned to repeat internal urethroplasty but refused and preferred to go on with CISC and medical treatment, were all from control group.

Conclusion: This is probably the first study introduces hydrogel based MMC in prevention from urethral stricture recurrence. The drug has reduced stricture recurrence very satisfactorily, even in patients with history of previous internal urethroplasty or BPH on medication or prostatectomy. Based on our results, MMC hydrogel may have antifibrotic action preventing anterior urethral stricture recurrence with no side effect on pre-urethral tissue.
**Table 1.**

<table>
<thead>
<tr>
<th>Fistula type</th>
<th>Fistula orifice</th>
<th>Approach</th>
<th>Urethral stenting</th>
<th>Interposition tissue graft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low fistula</td>
<td>Bulbar or membranous urethra/bladder neck/low-trigonal</td>
<td>Perineal</td>
<td>No</td>
<td>Tunica vaginalis/tunica dartos/ gracilis muscle/bulbus/biomaterial</td>
</tr>
<tr>
<td>High fistula</td>
<td>Mid-trigonal/supra-trigonal</td>
<td>Transvesical</td>
<td>Yes</td>
<td>Omental flap/biomaterial</td>
</tr>
<tr>
<td>Transprostatic</td>
<td>Prostate/prostatic urethra</td>
<td>Transabdominal</td>
<td>Yes</td>
<td>(proctectomy + prosectomaty) colonic pull through</td>
</tr>
</tbody>
</table>

sulted in a final fistula resolution rate of 93.3%. Postoperative morbidity occurred in 10 patients. Four patients, previously treated with pelvic radiotherapy, got a permanent colostomy. Mean time of follow-up was 12.7 months.

**Conclusions:** Treatment of iatrogenic RUFs is extremely challenging. An aggressive, multidisciplinary surgical approach is needed. Based on our findings we recommend different approaches according to the location of the fistula (Table 1). In most patients, success can be accomplished without permanent urinary and/or fecal diversion, although a high morbidity rate is seen.

**MP-12.04**

**Tissue-engineered Buccal Mucosa Urethroplasty: Outcome of Our First Patients**

Engel O, Ram-Liebig G, Pfalzgraf D, Reiss P, Fisch M, Dahlern R

1University Medical Center Hamburg-Eppendorf, Hamburg, Germany; 2UroTec GmbH, Dresden, Germany

**Introduction and Objective:** The open urethroplasty using buccal mucosa grafts is an established method for the treatment of urethral strictures. Due to the fact that the length of the graft at the donor site is limited, the stricture length to be reconstructed with conventional buccal mucosa is restricted. To reconstruct longer strictures, the use of tissue engineered grafts is promising. We report our first outcome.

**Materials and Method:** Six patients with bulbar and penile urethral strictures underwent an open urethroplasty using tissue engineered buccal mucosa grafts. A 1 cm² piece of buccal mucosa was harvested in local anesthesia. A tissue engineered graft was produced and implanted after three weeks. The catheter was removed after ten days. After three weeks, an anastomosis. The follow up showed a strong flow and no residual urine.

**Conclusion:** Tissue engineered buccal mucosa grafts seem to be a useful alternative to full mucosa grafts. A further follow-up is necessary to compare tissue engineered grafts to standard open urethroplasty.

**MP-12.05**

**Transvaginal Repair of Genital Prolapse with Prolift System: Morbidity and Anatomic Outcomes After 6 Years of Use: A Multicentric Study**


1Dept. of Urology and Andrology, Robert Debré, University Hospital, Reims, France; 2Dept. of Urology, Manchester General Hospital, Charleville, France; 3Dept. of Obstetrics and Gynecology, Manchester General Hospital, Charleville, France

**Introduction and Objectives:** The Gynecare Prolift mesh system for treatment of genital prolapse was introduced in 2005. We reported our outcomes using this new vaginal approach in pelvic reconstruction.

**Materials and Methods:** We performed a retrospective chart review of all patients who underwent a Prolift procedure in 2 years. We recorded all intra-operative incidents, post-operative complications, anatomical and functional outcomes. All patients underwent a recent pelvic examination. Failure was defined as recurrent prolapse (stage ≥ 2) or any symptomatic prolapse. We reported the rate of de novo prolapse of an initially unaffected and non-treated vaginal compartment and assessed the post-operative sexuality.

**Results:** Over a 6-year period, 116 consecutive patients were included with a mean follow-up of 24.8 months (1-64). Mean age was 64.7 ± 10.9 years (40-86) and median parity was 3 (0-8). Seventy-nine patients had a stage 3 (68.1%) and 9 patients, a stage 4 (7.7%). Prolift surgery was performed for prolapse recurrence in 23% (n=27). Total mesh was used in 32 patients (27.6%), an isolated anterior mesh in 58 patients (50%) and an isolated posterior mesh in 26 patients (22.4%). Concomitant surgical procedures were performed in 47 patients (40.5%). We reported 3 intra-operative bladder injuries (2.5%). None transfusion and bleeding greater than 250mL were reported. Post-operative complications occurred in 26.7% (n=31) including defecation difficulties (12), urinary tract infections (3), urinary retentions (3), infections (4), chronic pain syndromes (4) and mesh exposures (5). Four mesh exposures were successfully managed with mesh resection under anesthesia; one required total ablation after secondary retraction at 45 months. Overall, 87.1% (27/31) of the complications were managed medically. We reported a failure rate of 6.9% (n=8) occurring after a mean of 13.714 months (1-35). Nine patients presented a de novo prolapse (7.7%). Fifty-five patients had pre-operative sexual activity (47.4%). The de novo dyspareunia rate was 16.3% (n=9); insertion (5), deep penetration (1), throughout intercourse (3). Eight patients reported a decline of their sexual activity after surgery (14.5%).

**Conclusions:** The Prolift system seems to be associated with few severe complications and achieved good mid-term anatomical outcomes. A long term follow-up is necessary to confirm the effectiveness of the procedure.

**MP-12.06**

**Reconstruction of Extended Urethral Strictures with Buccal Mucosal Graft. Success Rates After 60 Months of Follow-up: Analysis of 184 Patients**

Pandey A, Beier J, Keller H

Clinic of Urology, Pediatric Urology and Urological Oncology, Sana Klinikum Hof, Hof, Germany

**Introduction and Objectives:** To report the results of reconstruction of extended recurrent urethral strictures with buccal mucosal graft (BMG) after follow-up of at least 60 months.