Moderated Poster Session 12: Trauma & Reconstruction Tuesday, October 18 15:15-16:45

MP-12.01

Efficacy of Intraurethral Mitomycin C Hydrogel in Prevention from Anterior Urethral Stricture Recurrence After Internal Urethrotomy

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Introduction and Objective: Studying efficacy of intraurethral MMC hydrogel in prevention from anterior urethral stricture recurrence after internal urethrotomy in men.
Materials and Methods: A mixture of 0.8 mg MMC with 1cc water and propylene glycol was added to pf-127 poloxamer in theater. There were 40 men with ages ranging from 14 to 89 years old randomized in 2 groups: control and MMC. In MMC group patients were received the MMC-Hydrogel while the others just been catheterized. Both groups had their catheters for at least 1 week.
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 urethrotomy existed in 15 patients. In comparison between two groups there was no meaningful difference (P = 0.327). Urethral stricture recurrence happened in 12 patients (30%). In comparison between two groups, in control group there were 11 patients (91.7% 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 urethrotomy) 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 urethrotomy 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 urethrotomy 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.

MP-12.02

The Electronic Modular Artificial Sphincter ARTUS: Results of the Cadaver Study

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Introduction and Objective: The AMS 800 sphincter is considered to be the gold standard in the treatment of severe stress incontinence. However the permanent pressure on the urethra can result in severe complications, i.e. tissue atrophy, urethral erosion. A new electronic device which can compress successive parts of the urethra intermittently can reduce these risks. Based on the animal studies we start the usability test in cadavers.
Materials and Methods: In 6 cadavers (3 male, 3 female) with different BMI we implant the electronic modular system ARTUS. The cuffs were implanted by a perineal incision. The cuffs were located in the peno-bulbar in male and in the proximal urethra in female. The battery and control unit were implanted in the right lower abdomen, therefore it was performed a subcutaneous pouch. The guiding wires were passed lateral to the spermatic cord to the cuffs. After that the system was connected. The cuff size and the length of wires were measured, the localization of the control and battery unit were documented.
Results: The implantation of the new sphincter is easily done by the same technique than the AMS 800. The cuff size is 4.5 cm in male and 6 cm in female. The average length of wires is 12 cm (10.5-14cm). The subcutaneous pouch for the battery and control unit has to be bigger than the space for the tubes of AMS 800. There is no difference in implantation in cadavers with low, middle and high BMI. Interpretation of results: Our results show that the new sphincter ARTUS can be implanted easily in cadavers. The technique is almost the same like in the AMS 800 sphincter. Only the length of wires shows a difference according to BMI.
Conclusion: The results of the cadaver study show the usability of the new sphincter ARTUS. The clinical investigation will start in the near future.

MP-12.03

Management of Iatrogenic Rectourinary Fistulas: A Six-Year Experience

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Introduction and Objective: Rectourinary fistulas (RUFs) are a rare but challenging clinical problem. Since spontaneous healing of RUFs is uncommon, surgical management is required. However, surgical repair remains a challenge to the reconstructive surgeon. The lack of standard treatment modalities is testimony of the rarity of RUFs and the difficulty of treating them, resulting in a high recurrence rate. We like to report our six-year single-center experience in managing iatrogenic RUFs and propose a guide for diagnosis and management.
Materials and Methods: We reviewed the records of all patients treated for acquired RUF at our center between 2003 and 2009. Collected data included age, etiology, symptoms, diagnosis, fistula type, treatment, follow-up, and outcome.
Results: Sixteen male patients with iatrogenic RUF were identified. Mean age was 63 years. Nine patients developed a RUF following treatment for prostate cancer, three patients with a history of radiotherapy for prostate cancer developed a RUF following treatment for anal/rectal pathology, four patients had previous interventions for rectosigmoid neoplasms. Ten patients were initially treated with temporary urinary and/or fecal diversion; nine of these required further surgical intervention because of fistula persistence. Six patients underwent immediate fistula repair or excision without a preceding diversion procedure. Different surgical approaches were used: transabdominal, transvesical, perineal, transanal. In three patients resolution of RUF was realized after one intervention. Reoperation re-

MP-12.03, Table 1.

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

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
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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 cm^2 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 urethrography was done. Every three month an uroflowmetry was performed.
Results: Patients showed no problems at donor site. The handling of the graft during operation was comfortable. The x ray examination showed watertight and wide 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
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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 centres. 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 64.710.9 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 anatomic 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
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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.