Transvaginal Repair of Vesico Vaginal Fistula: A 10-Year Experience with Analysis of Factors Affecting Outcomes

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**Introduction:** To highlight transvaginal route as an excellent approach for repair of a simple trigonal, supra-trigonal vesico-vaginal and urethrovaginal fistula without compromising on the successful patient outcomes. We also determine factors affecting outcomes in such patients.

**Material:** A retrospective analysis was carried out on 58 patients with simple trigonal, supra trigonal and urethrovaginal fistula who underwent transvaginal repair for last 10 years. Simple fistulas were defined as fistula less than 3 cm in size or recurrent fistula less than 1.5-2cm in size and located either supra-trigonally (above the bar of mercier) or sub-trigonally (below the bar of mercier) as determined by cystoscopy.

**Result:** Obstetric cause, due to obstructed labour, was the most common cause of fistula formation 68.96% while 29.31% were attributed to hysterectomy. 68.9% were primary fistulae while 31.1% were recurrent fistula. Mean age of patients was 33.4 years. Average fistula size was 1.5 cm. The success rate of primary operation was 84.12% (50/58). On using a multivariate regression model the underlying etiology (Odds ratio - 2.2), fistula location (OR - 2.5) and history of previous repair (Odds ratio 2.4) were found to be significant factors affecting outcome.

**Conclusion:** The transvaginal approach is less invasive and achieves comparable success rates as compared to other methods of vesico-vaginal fistula repair. This surgery with Foley catheter has high success rate with reduced morbidity. We postulate that vaginal approach should be preferred over abdominal approach for repair of all vaginally accessible VVF, both of obstetrical and gynecological origin.

Modified Pubovaginal Fascial Rectus Sling in the Treatment of SUI in the Era of Mid-Urethral Slings

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**Introduction:** The treatment of female stress urinary incontinence (SUI) has evolved over the last decade. Traditional surgeries for SUI such as Burch colposuspension Pubo-vaginal sling, have slowly been supplanted by mid-urethral slings. With the recent concerns raised by the US FDA and Health Canada about the safety of mesh implants including MUS, the need for revisiting autologous tissue slings has arisen. Indications for sling are the same as for MUS, viz., ISD, Urethral hypermobility, ISD with cystocele, ISD associated with urethral diverticulum, ISD in neurogenic conditions and failed prior retropubic or Mid-urethral sling suspension.

**Material:** This study was a retrospective review of patients operated upon by a team of Urologists from 2002 - 2014. A total of 97 female patients with age range from 25 - 65 yrs were operated. Majority of the patients were multiparous, and post-menopausal. Post hysterectomy patients and failed MUS were also part of the study. History, clinical examination were performed according to a set proforma in all patients. Operative data was recorded.
Operation was performed in general as well as in regional anaesthesia. Mean operating time was 45 min with average blood loss of 100ml. Average Sling length was 10 cms with a width of 2 cms. Hem-o-lok clips (10mm) were used at both ends over the rectus sheath after appropriate tension was assessed. Hospital stay was 3 days. Complications occurred in 17 pts, most common was failure to void. 81 pts on follow up are voiding well & have no leakage or retention.

Conclusion: Pubovaginal fascial rectus sling is an effective & appropriate alternative to MUS with minimal morbidity, especially after failed MUS mesh, ISD & cystocele, with good long term functional results.

**Ejaculation preserving HOLEP/TURP for Benign Prostatic Hyperplasia - Myth or reality?**

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**Introduction:** An almost inevitable adverse event of the conventional TURP/HOLEP is the loss of antegrade ejaculation, seen in 65% - 80% of patients. It has been hypothesized that to preserve the antegrade ejaculation, the paracollicular and the situated tissue, which is located 1cm proximal to the verumontanum should not be resected. This is mainly related to the importance of the musculus ejaculatorius and verumontanum for ejaculation. To date there is sparse data on techniques to preserve ejaculation in patients undergoing TURP/HoLEP. On the basis of this clearer understanding of the process of ejaculation, a new technique in transurethral prostate surgery, termed ejaculation-preserving TURP (epTURP), /HoLEP (epHoLEP), has been coined with the overall aim of preserving antegrade ejaculation with comparable functional outcome for micturition parameters to regular TURP/HoLEP.

**Material:** All eligible patients were evaluated by question no 5 (When you attempted sexual intercourse, how often was it satisfactory for you ?) & question no 9 (over the past 4 weeks, when you had sexual stimulation or intercourse how often did you ejaculate?) of IIEF 5 questionnaire preoperatively & postoperatively. The paracollicular tissue and the area 1cm proximal of the verumontanum was preserved and was not be affected by cutting or coagulation. Deep resection behind the verumontanum was avoided because of the increased risk of damaging the ejaculatory ducts or the musculus ejaculatorius.

**Result:** A total of 119 patients of BPH were included in the study who visited our hospital. Of the 119 patients, 56 (47.06%) patients underwent epTURP and 63 (52.94%) patients underwent epHoLEP. At baseline, the mean (SD) overall sexual satisfaction and ejaculation was 2.57 (0.49) and 2.60 (0.49) among patients who underwent epTURP and epHoLEP, respectively. The difference between epTURP and epHoLEP groups was not statistically significant. After treatment, the overall ejaculation reported to be unchanged in patients from epTURP group (p=0.54) and deteriorated epHoLEP group (p<0.001). The difference between epTURP and epHoLEP group was statistically significant (p<0.0001).

**Conclusion:** Antegrade ejaculation and overall sexual satisfaction was preserved/better in epTURP group as compared to ep/HoLEP group. It may be possible to preserve the ejaculation in HoLEP as well when prostate sizes are small. However more large scale studies will help to conclusively prove the strength of evidence in favour of this technique.
Efficacy of tranexamic acid as intravenous and topical agent in decreasing primary haemorrhage in transurethral resection of prostate - a prospective randomised controlled trial
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Introduction: Transurethral resection of prostate (TURP) has remained as a gold standard treatment for BPH. The main complication in TURP is bleeding. Urothelium and prostatic tissue is rich in plasminogen activators which following surgical trauma in combination with high urokinase levels in urine causes lysis of the clots or fibrinolysis. Tranexamic acid (TXA) has a plasminogen-binding potency 6–10 times greater than others medications of the same class and blocks fibrinolysis. Therefore, administration of TXA might be beneficial in reducing the amount of intraoperative blood loss resulting from TURP. In this study we aimed to evaluate the effectiveness of Tranexamic acid used intravenously and as a topical agent in reducing intraoperative blood loss and need for blood transfusion.

Material: A total of 100 patients aged 50 - 80 yrs, with bothersome LUTS and proven prostatic enlargement were enrolled in the study and divided into 2 groups. Group (1) received IV TXA 500 mg after induction of anaesthesia and 500mg in each irrigation fluid bottle (maximum upto 2g) and the control group (2) received none. Randomization into 2 groups of 50 each was done based on computer generated randomised table. Serum hemoglobin was measured preoperatively and 24 hours after surgery. The volume and hemoglobin concentration of irrigation fluid and duration of resection was also noted. Blood loss was calculated from above. Patients with previous prostate surgery, treatment with any 5 Alpha reductase inhibitors within 12- months, treatment with aspirin or bleeding disorders were excluded.

Result: In this study use of TXA decreased intraoperative blood loss significantly. However operating time, irrigation fluid volume and blood transfusion rates were not significantly different between the groups.

Conclusion: TXA is effective in reducing intraoperative blood loss. However more studies with larger patients are required for further evaluation of its role on all parameters.

To compare result of Thullium Laser Enucleation of prostate versus Bipolar Transurethral Resection in large prostate (>60gm) - A prospective randomised study
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Introduction: Bipolar TURP is now considered as gold standard surgical treatment for BPE. Recent advancement in laser technology have resulted in surge of various type of lasers, including thulium laser. This study aimed at comparing the intra and early postoperative outcomes between ThuLEP and Bipolar TURP in a randomised manner.

Material: 52 patients with large prostate (>60 gm) randomised in ThuLEP (n=26) or Bipolar TURP (n=26) arm. All Patients were evaluated intraoperatively and postoperatively for parameters like resection time, blood loss, catheterisation time, hospital stay, IPSS, Qmax, QOL, and PVR.

Result: Compared with Bipolar TURP, ThuLEP had equal operation time (96.7 vs 87.57minutes) but less blood loss (0.347 vs 0.441L) and equal catheterization time (21.62 vs 26.5 hour). On 7th day, 1 &
3 months of follow-up, these procedures showed no significant difference in Qmax, IPSS, PVR, and QOLS parameter. Drop in serum PSA is more in ThuLEP than Bipolar TURP (38% vs 27%).

**Conclusion:** Both techniques relieve LUTS equally, with high efficacy and safety. ThuLEP is superior to bipolar TURP in blood loss, and have equal catheterization time and long operative time. However, procedures did not differ significantly in Qmax, IPSS, PVR, and QOLS at 7 day & 3 month of follow up.