



UROFLOWMETRIC IMPROVEMENT IN RETROPUBIC PROSTATECTOMY VS TURP FOR PROSTATE WEIGHING 50-70 GRAMS

General Surgery

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ABSTRACT

OBJECTIVE: This is a comparative study analysing uroflowmetric improvement in patients undergoing retropubic prostatectomy with turp for prostate size 50-70 grams

MATERIALS AND METHODS: From February 2018 to January 2019, 98 patients with prostate size 50-70 gms divided into two groups, Group A undergoing retropubic prostatectomy and Group B undergoing TURP in Department of Urology, PMCH, Patna were studied. Patients were assessed preoperatively with the Urinary flow rate measurements (Qmax and Qavg) as well as prostate volumes by transabdominal ultrasound. Clinical outcome was evaluated by the difference in Qmax and Qavg before and 2 months after Surgery.

RESULTS: There was a significant improvement in Qmax and Qavg postoperatively. Improvement was better in the patients undergoing retropubic prostatectomy than TURP. Mean overall change D Qmax and D Qavg was 7.74 ml/sec and 6.74 ml/sec respectively in patients undergoing TURP while Mean overall change D Qmax and D Qavg was 9.1 ml/sec and 8.48 ml/sec

CONCLUSION: Retro pubic prostatectomy had better improvements when compared to TURP.

KEYWORDS

Uroflowmetry, Retropubic Prostatectomy, TURP, Prostate

INTRODUCTION:

Benign Prostatic hyperplasia (BPH) is the commonest cause of urinary problems in elderly males affecting the quality of life¹. About 10% of patients will need surgical intervention at some stage. Dihydrotestosterone is responsible for prostatic hyperplasia and 5-alpha reductase inhibitors provide base for medical treatment. Modalities of treatment include watchful wait, medical treatment like alpha blockers and fenesterides for small prostate with mild symptoms and surgical treatment like TUIP, TURP², and open prostatectomy for symptomatic prostates of moderate to large size, laser ablation, thermotherapy, use of urethral stents and ballooning for poor risk patients^{3,4}. TURP has replaced open prostatectomy^{5,6}. In developed countries, a procedure still common in developing countries where lack of facilities and late presentation with huge prostate is the reason for employing it⁷. Other main reason for employing open prostatectomy is associated complications like vesical calculus or diverticulae. Open prostatectomy is still enjoying a respectable place in urology because long term results and patients compliance rate are acceptable^{8,9}. Open prostatectomy (Milan's and transvesical) is one stage procedure intended to remove prostatic adenoma¹⁰. It appears more horrible from the scene of blood but it is safe and easy to perform. No special or sophisticated equipment is required.

A laparoscopic transvesical approach has been proposed by Sotelo and co-workers and permitted the concomitant management of any coexistent intravesical pathology, such as bladder calculi. Some of the new transurethral techniques, such as holmium, enucleation and photoselective vaporization of the prostate with KTP laser, already proved efficacious in dealing with large prostates. The implementation of these two technique will probably make open prostatectomy redundant in specialized center's although they have not become yet the gold standard for the treatment of large prostate glands. This study was carried out to analyze and compare the results of uroflowmetric improvement between retropubic and transurethral prostatectomy.

MATERIALS AND METHODS:

The present study was carried out in the Department of Urology, Patna Medical College and Hospital, Patna between February 2018 to January 2019.

Patients presenting with lower urinary tract symptoms viz, weak

urinary stream, frequency, hesitancy, intermittency, urgency, nocturia etc. were included in the study. Patients were evaluated on basis of the American Urological Association symptom index questionnaire. They were also evaluated by transabdominal ultrasound examination and patients having BPH on USG were further evaluated by Uroflowmetry. Patients with obstructive symptoms and documented obstruction on uroflowmetry were finally included in the study. Patients included were having moderately enlarged prostate and patients in whom only TURP was done were excluded from study.

TURP was performed using 26 French standard loop resectoscope. Tissue resected was weighed in the operation theater immediately after the completion of TURP 24 French Foley's catheter inserted and balloon placed in the prostatic fossa with a volume corresponding to the amount of tissue removed. Irrigation was maintained until the next morning. The catheters were removed routinely on the 3rd day following TURP. Patients were usually discharged 3rd day after catheter removal.

In an open prostatectomy, the prostate is accessed through a Pfannestiel incision through the lower abdomen. A retropubic prostatectomy describes a procedure that accesses the prostate by going through the lower abdomen and behind the pubic bone. D.V.C was ligated with Vicryl 1 No suture Proximally and Distally. In between incision was given over capsule. Adenoma was enucleated. Foley's catheter was provided. Capsule was closed with 1-0 Vicryl suture. Wound was closed in layers.

Clinical outcome was evaluated by the difference in Qmax and Qavg before and 2 months after surgery.

RESULTS:

Total 98 patients were enrolled for the study out of which 49 underwent retropubic prostatectomy and rest 49 underwent TURP. The mean age of the patients were 62.6 years (range 50 years to 91 years). Thus TURP done for BPH symptoms resulted in symptomatic improvement post-operatively.

Pre-operative prostatic weight, as determined by Transabdominal USG examination ranged from 50-70 gms. The pre-operative prostatic weight although did not always correlate with symptom severity. Even

small prostates may cause severe symptoms and large prostates may remain relatively asymptomatic.

Post operatively a maximum of 44% patients had prostatic weight in the range of 51-55 gms. Post operative prostatic weight also correlated well with improvement in Qmax post-operatively. This may be explained by the fact that more the tissue that was resected the better was bladder outflow tract and hence the urinary flow.

Analysis of the maximum urinary flow rates also showed significant improvement post-operatively. The mean pre-operative Qmax was 9.59. Post-operatively mean (Qmax) improved to 17.33 ml/sec.

Our findings again correlated well with those of other investigators notably RH. Abrams et al. (1977)¹¹. They found that the mean Qmax had increased from 8.0 to 17.2 ml/sec.

On studying the pre-operative average flow rates (Qav) maximum no. of patients had Qavg. rates in the range of 610 ml/sec (52%) followed by <5 ml/sec (48%). The mean pre-operative Qavg was 5.18 ml/sec. Post-operatively there was significant improvement in the Qavg and 86% of the patient had Qavg > 10 ml/sec. The mean post-operative Qavg. Improved to 11.92 ml/sec.

In retropubic prostatectomy, The results of the uroflow test before and after showed that maximal uro- flow changed from 10.1 mL/sec to 19.2 mL/ sec, and Qavg changed from 5.72 ml/sec to 14.2 ml/sec.

DISCUSSION:

Prostatectomy includes a number of surgical procedures to remove part or all of the prostate gland. The prostate gland is situated in the male pelvis, below the urinary bladder. It surrounds the urethra, which carries urine from the bladder to the penis. Changes that may occur on bladder due to benign prostatic obstruction may not revert despite removal of obstruction.

Prostatectomy can be performed in several ways like transvesical prostatectomy, retropubic prostatectomy and Transurethral Resection of prostate. Our study compares the uroflowmetric changes that occur following prostatectomy either by TURP or Retropubic Prostatectomy. Now various Endoscopic Procedures like Enucleation with Bipolar TURP, Enucleation with Laser are gaining popularity because improvement in flow rate are more with enucleation than transurethral resection of prostate.

CONCLUSION:

Following conclusions were drawn from the present study, Milan's is the open method and TURP is an endourological procedure; both of them having their own complications. Transurethral resection is more gentle method for patients, surgeons and hospitals. However it requires costly instruments, special training and skilled urologist. Disadvantages of Milan's method is long post operative stay, chances of wound infection, need to put external incision. The principle of selecting proper individual patient is important in obtaining good results. In expert hands and with proper monitoring facilities TURP is the best method of prostatectomy for small glands. However open prostatectomy results in significant improvement of uroflowmetric values.

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