

TRANSURETHRAL RESECTION VERSUS TRANSVESICAL APPROACH FOR BENIGN PROSTATIC HYPERPLASIAS. S. Karbhari¹, Veeresh Hosamani², Nagnath Hulsoore³, R. B. Dhaded⁴**HOW TO CITE THIS ARTICLE:**

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ABSTRACT: BACKGROUND: Benign Prostatic Hyperplasia (BPH) is a common disease in elderly people. Different surgical treatment options were available in which transvesical and transurethral resection of prostate are commonly employed for BPH in our set up. **AIM:** To compare the immediate complications, hospital stay, days of immobilization, duration of indwelling catheter, mortality and morbidity. **MATERIALS AND METHODS:** A comparative study was conducted between August 2012 to August 2014, which involved patients underwent TURP and transvesical prostatectomy. Patients having associated complications and post-op morbidities were compared. **RESULTS:** Commonest affected age group was 50-90 yrs. (Mean age 69.6 yrs.). 14 patients developed immediate significant postoperative complications in both, the procedures. 11 patients developed significant delayed post-operative complications in transvesical procedure. In TURP no delayed complications. In transvesical procedure average postoperative hospital stay was 16.08 days. In TURP it was 6.24 days. Compared to transvesical procedure days of immobilization (6.48 days) and indwelling catheterization (6.12 days) is significantly lower in TURP 3.12 days and 2.60 days respectively. Morbidities were more in transvesical prostatectomy and none in TURP. There was no mortality in this study. **CONCLUSION:** TURP has definite advantage over the transvesical suprapubic prostatectomy, because of shorter period of hospitalization, postoperative complications are less frequent, shorter duration and less severe. It has got lowest mortality and morbidity rates.

KEYWORDS: Benign Prostatic Hyperplasia (BPH), Transurethral resection of prostate (TURP), Transvesical prostatectomy.

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, the active form of testosterone (Through action of 5-alpha reductase) 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} Transurethral resection of prostate (TURP) has replaced open transvesical 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 it.⁷

The prostate volume threshold between transurethral surgery and open prostatectomy remains an open issue, patients with glands of 80 to 100 ml may be considered for open surgery in some countries while a two stage procedure with transurethral resection of one prostatic lobe at a time may be performed in other countries⁸. Other main reason for employing open prostatectomy is

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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.^{9,10} Open prostatectomy (Milan's and transvesical) is one stage procedure intended to remove prostatic adenoma.¹¹ It appears more horrible from the scene of blood but it is safe and easy to perform. No special or sophisticated equipment is required. The possibility to perform a Millin's prostatectomy in laparoscopy was proven by Porpiglia and coworkers in 2005, the operation is challenging its role in our armamentarium is yet to be defined. It may remain a technical exercise or it may be an additional step in the trend toward converting most urological procedures into laparoscopic surgery.¹²

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.¹³ Hospital stay is usually longer with open procedures with a mean hospitalisation ranging from 6 to 10 days in the modern series and it is due to a median of 5 day of catheterisation time.^{14,15,16} Urinary tract infection is a rare complications(6–8%) thanks to the modern antibiotic prophylactics and is comparable to that observed after TURP.⁸ 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.^{17,18} 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. Holmium enucleation suffers a long learning curve and significant capital investment which may limits its availability outside large institutions.¹⁹ Photo selective vaporisation is still a very young technique with a very short logbook. Although 5-years data have been recently published, these data need to be confirmed in extramural studies.²⁰ this study was carried out to analyze and compare the results of transvesical and transurethral prostatectomy as these are procedures carried out in our set up.

AIMS AND OBJECTIVES: To compare the following in transvesical and TURP.

1. Immediate complication;
2. Hospital stay;
3. Days of immobilization;
4. Duration of indwelling catheter;
5. Mortality and Morbidity.

MATERIALS AND METHODS: In the present study we had analyzed 50 cases of benign enlargement of prostate with signs and symptoms of urinary obstruction, admitted and treated from August 2012 to August 2014 in Basaveshwar Teaching & General Hospital, Gulbarga attached to M. R. Medical College, Gulbarga. Selected 25 cases for TURP and 25 cases of transvesical Prostatectomy with suprapubic drainage catheter procedure.

During this period of study no case was treated with retropubic prostatectomy and no case was treated with Freyer's prostatectomy with primary closure of bladder. Pre-operative assessment was done in all cases. Pre-operative catheterization was done in 24 cases. The analyzed data of the study is compared and discussed with reference to the other series in literature. Patients having associated complications and post-op morbidities were compared. Informed consent was taken from the patients and the study had been approved by the ethical committee.

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RESULTS:

Age group (years)	Transvesical		TURP	
	No.	Percentage	No.	Percentage
50-60	11	44	5	20
61-70	06	24	6	24
71-80	06	24	9	36
81-90	02	08	3	12
91-100	--	--	2	08

Table 1: Age wise distribution

Symptoms & Signs	Transvesical		TURP	
	No.	Percentage	No.	Percentage
Frequency	25	100.00	25	100.00
Dysuria	23	92.00	15	60.00
Loss of projection	15	60.00	20	80.00
Acute retention	16	64.00	19	76.00
Straining retards stream	7	28.00	9	36.00
Dribbling	5	20.00	6	24.00
Urgency	2	8.00	1	4.00
Retention with overflow	--	--	1	4.00
Previous history of retention	12	48.00	12	48.00
Chronic retention	5	20.00	--	--
Haematuria	1	4.00	1	4.00

Table 2: Symptom-wise distribution

Nature of Complication	Transvesical	TURP
Hiccoughs	1	2
Disorientation	2	1
Bleeding	1	1
Clot Retention	--	3
Hypertension	1	1
Hypotension	--	--
Chest pain	1	--

Table 3: Immediate Postoperative Complications

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Nature of Complication	Transvesical	TURP
Leakage of SPC	4	--
UTI	1	--
Wound Infection	4	--
Stricture	1	--
Epididymo-orchitis	1	--
Pneumonic Consolidation	--	--

Table 4: Delayed Postoperative Complications

The overall average duration of preoperative hospital stay was 7.06 days. The overall average duration of postoperative hospital stay was 12.58 days. In transvesical procedure the average postoperative hospital stay was 16.08 days. In TURP the average postoperative hospital stay was 6.24 days.

Days of Post-op indwelling Catheter	Transvesical		TURP	
	No.	Percentage	No.	Percentage
0-3	--	--	22	88
4-6	18	72	03	12
6-9	07	28	--	--

Table 5: Days of Post-op Indwelling Catheter

Days of Immobilization	Transvesical		TURP	
	No.	Percentage	No.	Percentage
0-3	--	--	18	72
4-6	15	70	07	28
6-9	10	30	--	--

Table 6: Days of Post-op Immobilization

Mortality Rate: During the period of this study, there was no mortality. Incidence of mortality was 0%.

DISCUSSION: The prostate undergoes significant growth during fetal development and puberty. After puberty, the prostate size remains more or less constant till it undergoes benign enlargement or may commence to atrophy and decrease in size. Guess²¹ (1990) suggested that there is a progressive increase in the diagnosis of benign prostatic hyperplasia in men with increase in age i.e. 26% in men 41-50 years old and 9% in men 71-80 years old. G1yn²² (1985) reported an incidence of 78% for benign prostatic hyperplasia in men by the age of 80 years.

In this study, all the maximum incidence of cases operated by two procedures falls under the age group of 50 to 90 years with a mean age of 69.6 years. Poor urinary flow and hesitancy were the

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commoner obstructive symptoms while increased frequency and nocturia were complained by many among the commoner irritative symptoms in a study by Pinnock ET a¹²³ (1997).

In the present study frequency of micturation and loss of projection, acute retention of urine were the commonest symptoms complained by the patients in both the series, in addition to the above symptoms 76% had dysuria and 2% had hematuria. 21.3% of patients were admitted with urinary retention. Duration of the complaints varied from 2 days of more than one year.

In post-op period catheter was removed on average 2.60 days in transvesical prostatectomy group while in TURP it was removed on average 7.88 days. In the transvesical prostatectomy, post-operative hospital stay was 16.08 days, while no patients stayed more than 30 days. In TURP average duration of post-operative stay was 6.24 days. In transvesical prostatectomy, days of immobilization was 6.48 days, while in TURP it was only 3.12 days on average. 4% of patients undergoing prostatectomy developed wound infection (Nanninga and O'Connor, 1986).²⁴ it was reported that the reason for a high wound infection rate was a high incidence (20-50%) of acute urinary retention in patients undergoing prostatic surgery requiring pre-operative Foley's catheterization. Other complications like urinary incontinence and urethral stricture and erectile dysfunction are in the range of 2-3%. Melchier²⁵ in 1974 reported a 1.3% mortality rate for prostatectomy. In this study, postoperative hemorrhage occurred in one patient and this required re-exploration on the same day. Postoperative wound infection in 4 (16%), post-operative complications like urethral stricture (2%) and UTI in 2% patients were noted.

According to McConnell (1994), efficacy of open, prostatectomy is greater than for any other treatment options available for the obstructing prostate gland. Abrams in 1979 using symptomatic and urodynamic criteria showed that 88% patients improved following prostatectomy. In the present series, Morbidity in terms of wound infection vesico-cutaneous fistula, U.T.I., epididymo-orchitis were present in transvesical prostatectomy and none in TURP. Patients also had urgency, incontinence and dysuria. Usually incontinence, dysuria improved within 6 weeks on following up the patients. The overall improvement after surgery on follow up was found to be 82.8%. The rest of the patients were lost to follow up after a period of 2 months and thus the symptomatology could not be studied in these patients.

CONCLUSION: The present study shows that TURP has definite advantage over the transvesical suprapubic drainage procedure, because of shorter period of hospitalization, postoperative complications are less frequent, shorter duration and less severe. It has got lowest mortality and morbidity rates.

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