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Surgery

A COMPARATIVE STUDY OF COMPLICATIONS AND OUTCOMES OF OPEN PROSTATECTOMY (OP) VERSUS TRANS URETHRAL RESECTION OF PROSTATE (TURP)

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ABSTRACT

Aim: To compare the complications and functional outcomes of open prostatectomy with TURP in management of benign prostatic hyperplasia.

Material and Methods: Patients who underwent prostatectomy for various indications admitted to a general surgical unit in our hospital during a period from January2016 to December2016 were included in our study.

Results: Two groups were formed, i.e. OP and TUR groups. OP Group included 26 patients who underwent open prostatectomy while TUR group included 24 patients.. Hospital stay, wound complications were slightly more in OP group. Better compliance was seen in a patient of TUR group. No mortality occurred in our study.

Conclusion: We concluded that TURP is the procedure of choice in the management of BPH particularly for patients with mild to moderate prostatic hyperplasia and in the aged patients with co-existing medical illness.

KEYWORDS : Open Prostatectomy, Transurethral Resection, Prostatic Hyperplasia.

INTRODUCTION

Benign Prostatic hyperplasia (BPH) is the commonest cause of urinary problems in elderly males affecting the quality of life[1]. 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, TURP[2], and open prostatectomy for symptomatic prostates of moderate to large size, laser ablation, thermotherapy, use of uretheral stents and ballooning for poor risk patients.[3,4] 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]. 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 adenoma.[10] 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.[11] 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.[12,13] 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 transvesical and transurethral prostatectomy as these are procedures carried out in our set up.

OBJECTIVE

To compare the complications and functional outcomes of OP with TURP in management of BPH, based on:

- Immediate complications
- Delayed complications
- Hospital stay
- Morbidity and mortality

MATERIALAND METHOD

Record of all the patients who underwent prostatectomy from January 2016 to December2016 was recorded. Patients were divided in two groups one who underwent open prostatectomy and other group included patients who underwent TURP.

Taking the history and physical examination, including digital rectal examination, Laboratory evaluations included serum level of creatinine, serum level of prostate-specific antigen (PSA), urine analysis, and urine culture. Ultrasonography of kidneys, the bladder, and the prostate were also performed. Evaluations included serum level of creatinine, serum level of prostate-specific antigen (PSA), urine analysis, and urine culture. Ultrasonography of kidneys, the bladder, and the prostate were also performed.

Data were also collected during the operation, postoperative hospitalization, and when patients referred to the clinic at 1 to 2 months postoperatively for complications.

Statistical analysis was done as required for the study.

RESULTS

Total 50 patients were enrolled for the study out of which 26 underwent OP and rest 24 underwent TURP.

Table1: Age Distribution

Age Group	OP		TURP	
	Number	Percentage	Number	Percentage
50-60	09	34	06	25
61-70	08	30.7	08	32
71-80	05	19.2	06	24
81-90	04	15.3	05	20.8
91-100	00	0	01	4.1

Table2: Symptom wise distribution

Signs and Symptoms	OP		TURP	
	Number	Percentage	Number	Percentage
Frequency	26	100	24	100
Dysuria	23	88.4	15	62.5
Acute Retention	17	65.3	20	83.3
Dribbling	06	23	07	29.1
Urgency	03	11.5	02	8.3
Retention with Overflow	00	00	01	4.1
Haematuria	01	3.8	02	8.3

Table 3: Immediate Postoperative Complications

COMPLICATIONS	OP	TURP
HICCOUPS	01	03
DISORIENTATION	04	02
BLEEDING	01	01
CLOT RETENTION	00	02
HYPERTENSION	01	01
HYPOTENSION	00	00

Table 4: Delayed Postoperative Complications

COMPLICATIONS	OP	TURP
LEAKAGE OF SPC	05	00
UTI	01	00
WOUND INFECTION	04	00
STRICTURE	01	00
EPIDIDYMO-ORCHITIS	01	00
PNEUMONIA CONSOLIDATION	00	00

Mean duration of hospital stay in case of patients who underwent OP was 11.5 days while in case of patients who underwent TURP it was 7.82 days.

DISCUSSION

Open transvesical prostatectomy is currently regarded as the only procedure that completely relieves prostatic obstruction.[14] OP usually used for large prostates or when another pathology necessitating open intervention such as multiple bladder stones coexists.[2] Previously, TURP was the most commonly used operation for obstruction relief and accounted for 60% to 97% of the prostate operations.[15-19] The use of OP is now mostly confined to less developed countries with little expertise or experience in endoscopy.[19]

In this study out of the total 50patients, 26 patients underwent Freyer`s prostatectomy and 24 underwent TURP.

Age

In the present study peak age group was 61-70years which was in concordance with the study of Ahmed[20] and most patients who underwent OP belonged to age group 50-60 while patients who underwent TURP belonged to age group 61-70.

Symptoms

In the present study frequency of micturition and dysuria , acute retention of urine were the commonest symptoms complained by the patients in both the series and it was in concordance with the study of S. S. Karbhari.[21]

Immediate Complications

In the present study the most common immediate complication in patients with OP was disorientation while in patients who underwent TURP had hiccoups and in **present study** there were 3.8% of cases **had post** operative bleeding in Freyer`s prostatectomy and 4.1% of cases **had post operative bleeding in TURP**. All **patients** were treated by giving blood transfusion. Similarly in the study of Lynch M *et al* [22] there were only 4% of cases had post operative bleeding in TURP.

Delayed Complications

In the present study all delayed complications were seen in patients who underwent OP. In our study 15.3% patients who underwent OP developed wound infection while 4% of patients undergoing prostatectomy developed wound infection in a study of Nanninga and O'Connor, 1986.[23] 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. Postoperative leakage of SPC in 5 (19.2%), post-operative complications like urethral stricture (3.8%) and UTI in 3.8% patients were also noted.

Hospital Stay

The average post operative hospital stay in case of patients who underwent OP was 11.5 days while was 7.82 days in patients who underwent TURP which was in accordance to the study of S.S Karbhari.[21] 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.[24,25,17]

Morbidity and Mortality

Morbidity in terms of wound infection vesico-cutaneous fistula, U.T.I., epididymo-orchitis were present in transvesical prostatectomy and none in TURP. No mortality was reported in our study

CONCLUSION

Following conclusions were drawn from the present study; Freyer's and TURP are the two commonest surgeries performed for benign prostatic hyperplasia. Freyer'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 Freyer`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 in a country like our`s where all ideal facilities are not available Freyer`s method will still be widely practiced for long periods.

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