

## Prospective Study on Removal of Urethral Catheter on Post Op Day 2 Vs Conventional Day 4 after Turp

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### **Abstract:**

**Aim:** To assess which modality (POD – 2 removal Vs POD -4 removal of catheter) has overall benefits for the patient undergoing TURP.

**Methodology:** we performed this prospective study on 68 patients From January 2011 to January 2014, The patients were divided into two groups. Group I included patients in whom the catheter was removed on POD – 2 and Group – II included patients in whom catheters were removed on POD-4. After removal of catheter, the patients were observed and outcomes carefully recorded.

**Results:** 11.76% patients in the POD-2 group and 11.76% patients on the POD-4 group developed retention of urine after catheter removal that required recatheterization . Catheter removal was done as an outpatient procedure around 7 days later. No patient in our study had to be on catheter beyond this period.

**Conclusion:** Our study shows that early catheter removal after TURP is beneficial to the patient and does not increase the complication profile

**Keywords:** BPH, Catheter removal, retention of urine, turp

### **I. Introduction**

The prostate is the most common site of urological disease in man. It is also the male organ most commonly affected with either benign or malignant neoplasms. The most prevalent and clinically significant form of abnormal prostate growth is benign prostatic hyperplasia (BPH).

The incidence is age related. The incidence of histological BPH in autopsy series rises from around 20% in men between 40-50 years to 50% in men aged 51-60 years to over 90% in men older than 80. Although the clinical manifestations of this disease is less common than this, symptoms of BPH also are related to increasing age-25% of men report obstructing voiding symptoms at age 55. At the age of 75, 50% of men are symptomatic. Despite the availability of a bewildering array of treatment modalities, Transurethral resection of prostate (TURP) introduced in the late 1920s and early 1930s, has revolutionised the treatment of BPH and is currently regarded as the 'gold standard' treatment for BPH, against which all other treatment modalities are evaluated. Currently, when surgery is performed for BPH, TURP is the choice in over 95% of cases. The high prevalence of symptomatic BPH in the aging male population, and the pre-eminence of TURP in its treatment has focussed attention on the after – effects of this form of surgery. Research has gone into the morbidity of this surgery itself and its cost-burden on society.

Traditionally, after this surgery, a foley catheter is placed transurethrally and is removed around the 4<sup>th</sup> post-op day. Post operative placement of a catheter after TURP provides for efficient bladder drainage after surgery, a means of bladder irrigation to prevent blood clots and acts as a tamponade on small bleeding points. Urinary retention developing after catheter removal after TURP may be related to persistent urethral obstruction or decreased/ absent detrusor contractility. Although older literature reports failure to void following post-TURP catheter removal (0.5-11% of cases), there is little or no mention of the exact duration of catheterisation following TURP. No standardised criteria for removal of catheter after TURP exists in literature.

Traditionally, the catheter is removed at around 4 days post – TURP. I conducted this study at our institution to help in deciding the interval for catheter removal following TURP, that is most beneficial to patients.

### **II. Aims And Objectives**

**2.1**To observe the patient after removal of urethral catheter on POD – 2 and POD – 4 after TURP for BPH

**2.2 :** To assess which modality (POD – 2 removal Vs POD -4 removal of catheter) has overall benefits for the patient undergoing TURP.

**2.3:** To compare the outcome parameters in both groups- like post-op PVR and uroflowmetry and the complication profile.

**2.4 :** To know whether the early removal of catheter in post-TURP patients will be beneficial when compared to the conventional 4th day catheter removal, since keeping a large diameter 22F foley catheter is often very inconvenient for the patient.

**2.5 :** To know whether post-TURP complications are reduced by early removal of Catheter

### **III. Materials And Methods**

A total of 68 patients were enrolled in the study. Age, size of the prostate (as determined by USG KUB), P.R grade of prostate, cystoscopic grade at TURP were recorded. Patients were assigned to POD – 2 and POD – 4 groups. Standard TURP was performed on all patients. A 24 french resectoscope was used with routine precautions taken to achieve maximum haemostasis without undue prolongation of resection time. Immediately after surgery, all patients had a 3 way foley urethral catheter placed with saline irrigation. The patients were basically divided into two groups. Group I included patients in whom the catheter was removed on POD – 2 and

**Group – II** included patients in whom catheters were removed on POD-4

### **IV. Discussion**

Rate of recatheterization after catheter removal Post-TURP surgery is reported in literature to occur in 0.5-11% of patients. The most common cause for this has been ascribed to hypotonic bladder in literature. It is postulated that age older than 80 and low maximal detrusor pressure are significant predictors to post-op failure to void after catheter removal.

The interval to catheter removal after TURP has decreased significantly in the past 2 decades. The benefit from such a decrease is medical, with a theoretical reduction of known complications of an indwelling catheter (Stricture and infection).

Our study shows that reduction in catheterization periods Post-TURP, is not detrimental to the patients and can in fact be of beneficial value (better patient satisfaction, reduced hospital stay, reduced infection from an indwelling catheter, reduced post operative discomfort and reduced requirements for analgesia). Early removal of catheter did not increase the morbidity and maintained the efficiency of the procedure.

Our study analysed various parameters like post-op PVR, bothersome urgency, bothersome frequently post-catheter removal urinary retention etc. All these parameters were statistically similar in POD-2 group as in POD-4 group. No statistically significant increase in complication profile was demonstrated in POD-2 group. Hence it would seem reasonable that after TURP, catheter removal on the second post-op day can generally be adopted. If this practice is adopted as routine, the savings resulting from the reduction in hospital stay would be considerable. Also the patient comfort and acceptance of this procedure (TURP) would increase

After removal of catheter, the patients were observed and outcomes carefully recorded. Parameters like uroflowmetry and PVR were recorded post-op, evaluated and compared.

### **V. Results**

Our study shows that early catheter removal after TURP is beneficial to the patient and does not increase the complication profile. This is supported by the following data.

Over all 11.76% patients in the POD-2 group and 11.76% patients on the POD-4 group developed retention of urine after catheter removal that required recatheterization. Those who failed catheterization (developed retention) in either group were recatheterized and discharged with catheter. Catheter removal was done as an outpatient procedure around 7 days later. No patient in our study had to be on catheter beyond this period. In the POD-2 group 4 patients developed retention requiring recatheterization. In the POD-4 group 4 patients developed retention requiring recatheterization. There was no statistically significant increase in recatheterisation rate in the POD-2 group, suggesting that urinary retention does not develop at a higher rate when early (POD-2 Vs POD-4) catheter removal is practiced after TURP.

The average Post-Op PVR was 18.38ml in the POD-2 group and 19.46ml in the POD-4 group. This average PVR was not higher in the POD-2 group when compared with the other group.

After catheter removal, some patients in our study developed transient urgency/ urge incontinence. Again no statistically higher urgency/ incontinence rate was recorded in the POD-2 group.

Some patients reported bothersome increased frequency after catheter removal Post- TURP. This parameter too was not reported at any higher rate in POD-2 group than the POD-4 group.

A question “on a scale of 0-100, how satisfied are you with the treatment for your condition?” was posed to all patients in the study. The POD-2 group patients reported higher scores than the POD-4 group. This is probably related to lesser patients discomfort, lesser requirements for analgesia and earlier discharge from hospital in this group.

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