

## Experience of hundred cases of transurethral resection of prostate at tertiary care hospital in Karachi

Shahnawaz Rajpar,<sup>1</sup> Bilal Surya,<sup>2</sup> Khalil Mobin,<sup>3</sup> Santosh Kumar<sup>4</sup>

### Abstract

To share the experience of 100 cases of Transurethral Resection of Prostate (TURP), This cross-sectional study was conducted in the Department of Urology, SMBBMC and Lyari General Hospital, Karachi from 1.1.13 to 30.4.15. One hundred cases were selected through purposive sampling. Patients who underwent TURP were included. Those with two life threatening co-morbidities, positive urine culture and patients on anti coagulant medications were excluded from the study.

Mean age of the patients was 66±6.2 years with minimum 60 years and maximum 85 years. Six percent of the cases were residents of Iran, while 30% belonged to Baluchistan and also from remote areas of Sindh. Prostate was found hard in 6%, with immobile mucosa in 1%, tenderness in 22%, upper margin not approachable in 6% and Nodularity in 3% of the cases

Lyari General Hospital is catering the surgical needs, especially endoscopic gold standard option (TURP), of the patients not only from Lyari but also from Baluchistan and Iran along with remote and underdeveloped areas of Sindh.

**Keywords:** TURP, BPH, CP, Ca Prostate.

### Introduction

Transurethral Resection of Prostate (TURP) can be considered as the most successful and least invasive procedure of BPH in the modern era. It is still the surgical treatment of choice and the standard care when other methods fail.<sup>1</sup> Asian and Asian American men have the lowest overall risk of clinical BPH and eventual TURP.

Blanchard in his study showed that patients put on alpha-blocker therapy before TURP showed poorer outcome following TURP than those who underwent TURP

<sup>1</sup>Urology Department, Shaheed Mohtarma Benazir Bhutto Medical College and Lyari General Hospital, <sup>2-4</sup>Department of Urology, Lyari General Hospital, Karachi.

**Correspondence:** Shahnawaz Rajpar. Email: dr.s.nawaz.rafique@gmail.com

directly.<sup>2</sup> The Prostate gland produces thin, milky fluid containing Citric acid and Acidphosphatase.<sup>3</sup> Most cases of the Chronic Prostatitis (CP) and 70% of the Cancer prostate arise in peripheral zone.<sup>4</sup>

In case of failure of medical therapy, the patient is moved to surgical intervention like Trans Urethral Resection of Prostate (TURP).<sup>1</sup> The current study shares experience of 100 cases of TURP, done in the Department of Urology, Sind Government Lyari General Hospital Karachi.

### Patients/Methods/Results

Procedure was done with minimum size of Prostate of 23 gm and maximum 190 gm. Patients included were Urinary Tract infection (UTI) negative and routine labs were within normal limits. Serum Prostatic Specific Antigen (SPSA) was performed on abnormal Digital Rectal Examination (DRE) or severe Lower Urinary Tract Symptoms (LUTS; irritative). Ultra sound Prostate was done for size of prostate and upper tract evaluation. Patients with severe comorbidities were excluded. Uroflometry (UFM) was not done and International Prostatic Symptom Score (IPSS) was not calculated in the few patients who were catheterized. Trans urethral resection was done successfully. Patients were 3-way catheterized post operatively. Foley's traction was applied in all patients to secure haemostasis. Continuous irrigation was ordered for 12 hours post operatively. Patients were discharged from hospital after being catheter free, vitally stable and afebrile.

Permission was taken from the Medical Superintendent of the hospital. Anonymity, autonomy and confidentiality of patients were strictly maintained. Verbal informed consent was taken and inclusion and exclusion in the study did not affect their due care in the hospital.

Data were entered into SPSS-17 and were pass word protected. Mean, SD, minimum and maximum was calculated for continuous variables like age. Residence of the patients was exhibited through bar graph. Multiple response analysis was done for co-morbidities and Prostatic features. Categorical variable like urine

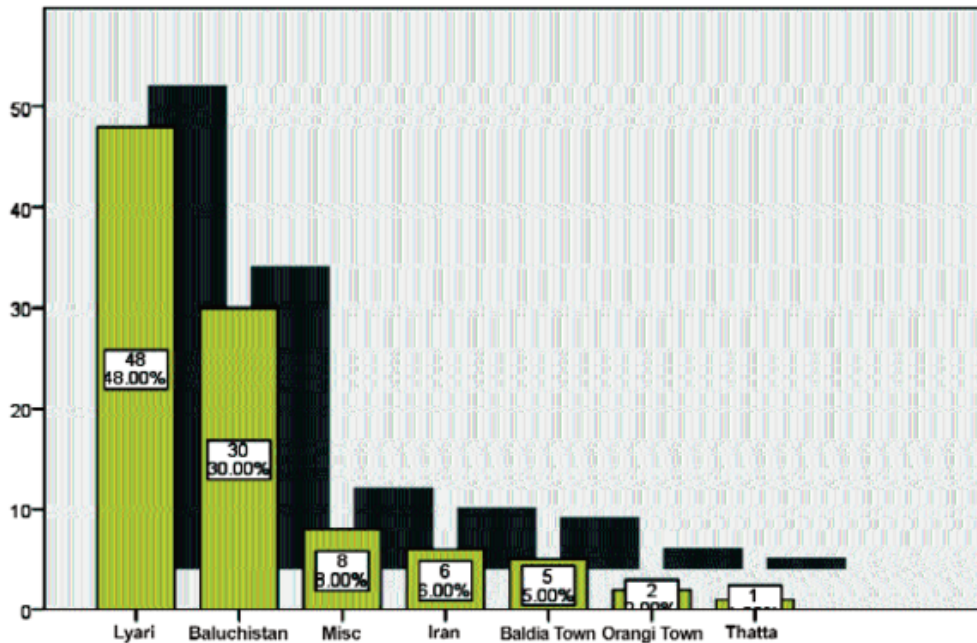


Figure: Residence of the patient (n=100).

culture type and indwelling Foley's catheter were exhibited in number and percentages. Missing data in continuous variables was handled by mean of the series.

Mean age of the patients was  $66 \pm 6.2$  years with minimum 60 and maximum 85 years. Six (6%) of the cases were residents of Iran, 30 (30%) belonged to Baluchistan and one (1%) was from Thatta (Figure). Prostate was found firm to hard in 6(6%), mucosa immobile in 1(1%), tenderness in 22(22%), upper margin not approachable in 6(6%) and Nodularity in 3(3%) of the cases. Nineteen patients were transfused blood pre-operatively with no transfusion needed operatively or post-operatively. Nine patients presented with deranged renal function. They were all catheterized, Subsequently they started producing good urine output with improved renal function. Out of these seven were in acute renal failure and were conservatively treated while two were in chronic renal failure and needed early haemodialysis before surgery and Arterio Venous Fistula (AVF) was constructed for future haemodialysis. Co-morbidities were present in 45(45%) of the patients. In situ Foley's catheter was present in 52(52%) cases. Urine Culture/sensitivity was done preoperatively. Most common uropathogen was E Coli and infected urine was treated accordingly before surgery. Mean weight of the prostate was 63gm, minimum 23gm and maximum 190 gm. Glycine was used as irrigation fluid in the strength of

1.5% during procedure (TURP). Maximum duration of surgery was 90 and minimum 40 minutes and during surgery no major complications were noted. Blood loss was not significant and post surgery hospital stay was three to four days and catheter was removed on third or fourth post-operative day. In histopathology 49(49%) of the biopsies showed BPH, 43(43%) were BPH with Chronic Prostatitis and 8(8%) were Cancer prostate.

Eight patients developed haematuria; out of those six were due to Urinary Tract Infection. In two of the patients with haematuria,

clot evacuation was done while remaining six were treated conservatively. The procedure results in the end of this study have been effectiveness on the answers given by the patients on International Prostatic Symptoms Score (IPSS) on first and second followup visits. Eighty (80%) of the patients were satisfied during first followup while 20(20%) were semi satisfied. On second followup after one month of surgery most of the patients were satisfied with their quality of life regarding their urinary symptoms.

Transurethral Resection of Prostate (TURP) is the gold standard treatment for Benign Prostatic Hyperplasia (BPH). Now a days there is sufficient availability of trained surgeons and technicians along with easy availability of equipments.

In this study, the mean age of the patients was  $66 \pm 6.2$  years with minimum 55 and maximum 95 years. In a study conducted in Austria on TURP the mean age of the patients was 69 years with range from 48 to 89 years.<sup>5</sup> Such disparity in mean age of patients could be due to countries with different socioeconomic conditions.

This hospital is not only catering the medical/surgical needs of Lyari but also other areas of country as Baluchistan and other countries as Iran. Patients from remote and underdeveloped area of Sindh also attend.

As a high risk of developing complications after TURP is generally perceived by the patients they are usually reluctant for undergoing surgery prefer to have urinary catheterization. In the study in hand, rate of pre-operative urinary catheterization was 52% while in the studies conducted in North America and United Kingdom the figures are 24% and 42% respectively.<sup>6</sup>

In this study, Digital Rectal Examination (DRE) revealed 6% of the prostate to be hard in consistency, 1% with non-mobile mucosa, 22% with tenderness, 6% with upper margins not approachable and 3% with Nodularity.

In the presented study, nine (9%) patients had deranged renal function. Out of nine, two were diagnosed as cases of Chronic Renal Failure due to Bladder Out flow Obstruction (BOO). However, following relieving of obstruction with catheterization, level of Urea and Creatinine improved in seven patients and normalized in those with Acute Renal Failure (ARF). Two patients with Chronic Renal Failure (CRF), had grossly deranged renal function and both needed early multiple haemodialysis before surgery and AVF was made for future haemodialysis. They were operated in two sittings due to massively enlarged prostate and to be on the safe side to avoid complications. In a study conducted by Thomas et al<sup>7</sup> TURP was done after normalizing renal function in patients presenting with obstructive renal failure secondary to Benign Prostatic Hyperplasia.

Co-morbidity can be considered as a strong predictor of length of stay in hospital. In our study co-morbidities were present in 45% of TURP cases whereas in the study by Serrata et al was 25 percent.<sup>8</sup> This could be due to the difference between the socioeconomic, general living conditions and the life expectancies in the two countries.

Our study showed that pre-operative urine culture was positive in 76 (76%) cases. They were treated accordingly before surgery and their post operative hospital stay was five to seven days compared to two to three days in the culture negative patients. Similar observation was found in a study conducted in Nairobi by Kiptoon<sup>9</sup> where the mean post operative hospital stay was 8.16 days.

In our study Glycine was used for irrigation during surgery while another study showed use of sterile distilled water<sup>10</sup> for that purpose as Glycine is expensive. Sterile distilled water is being used in Nigeria

for bladder irrigation.<sup>11</sup>

In the presented study there had not been any case of prostate capsular deep injury, TURP syndrome and massive bleeding during the procedure. All the surgeries were done successfully and have been uneventful. In all procedures there was no need of post operative intensive care unit (ICU) or blood transfusion. In a study conducted by Uchida and colleagues<sup>12</sup> perforation of prostate capsule was seen in 4.4% cases.

Post operatively, urinary bladder irrigation had been done for twelve to twenty four hours and Foleys catheter traction was removed after twelve hours. In two (2%) patients, post operatively, Foleys catheter dislodged spontaneously after eight to ten hours due to low quality foleys material and both the patients developed haematuria which was managed accordingly. In all the patients there had been no need of blood transfusion either during or after surgery.

This study shows mean weight of the prostate being 63gm, maximum 190gm, minimum 23gm. In a study conducted in Romania by Persu and colleagues<sup>13</sup> the largest prostate resected weighed 150 gm and mean weight of prostate was 95gm.

In this study, histopathology of the prostate showed 49% BPH, 43% BPH with Chronic Prostatitis (CP) and 8% Ca Prostate. The finding of prevalence of CP in BPH is in contrast to that found in the study conducted in Michigan, USA,<sup>14</sup> where prevalence of CP in BPH was 6.7%. This is nearly one third that found in our study.

In this study prevalence of CP was almost five times that of Cancer Prostate while in another study<sup>15</sup> CP is twice as common as prostate with neoplastic changes. In the same study prevalence of Cancer of the prostate was 7% while in this study it was 8%. In these two studies the finding of the ratio of CP with Cancer prostate was contradictory while that of prevalence of Ca prostate was nearly the same.

## Conclusion

Lyari General Hospital is catering for the surgical needs, especially TURP, not only of the patients from Lyari but also from Baluchistan and Iran along with remote and underdeveloped areas of Sindh. There have been no major operative or post operative complications noted. The quality of life regarding urinary symptoms improves significantly after treating BPH with TURP. Therefore TURP procedure could be considered safe and not dependent on the size of the prostate if carefully evaluated preoperatively and performed by experienced hands.

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