

# MINIMAL TRANSURETHRAL RESECTION FOR SYMPTOMATIC BPH IN PATIENTS WITH CO-MORBID FACTORS

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## ABSTRACT

**Objectives:** To assess the long term results of minimal transurethral resection of Prostate (M-TURP) in patients with Benign symptomatic Prostatic Hyperplasia (BPH) with co-morbid factors.

**Material and Methods:** This study was conducted at the Urology Department of Lady Reading Hospital, Peshawar between March 2004 to April 2005 a total 62 patients underwent M-TURP. The patients were examined pre-operatively and six and 12 months post-operatively and then over a period of 5 years.

**Results:** At the end of 5 years follow up, 5(8.064%) patients were found to have died and another 8(12.90%) patients were lost to follow up. Eight patients (12.90%) had undergone repeat TURP and 5(8.064%) patients had been treated for urethral stricture. In 40 patients a significant relief in obstructive and irritative symptoms were achieved. There was an improvement in urinary stream and postvoid residual urine was significantly low also.

**Conclusion:** M-TURP may be recommended as an alternative to total TURP in patients with co-morbid factors who are not fit for prolonged anaesthesia and surgical trauma.

**Key Words:** Transurethral resection, Minimal resection, Prostate, Benign prostatic hyperplasia.

## INTRODUCTION

Transurethral resection of prostate (TURP) has been used for the past 50 years. TURP still represents the gold standard in the operative management of Benign prostatic hyperplasia (BPH).<sup>1-7</sup> Blandy preferred total resection of prostatic tissue inside the surgical capsule between the verumontanum and the bladder neck.<sup>8</sup> McCarthy<sup>9</sup> performed resection of the median and lateral lobes until a free view into the bladder was achieved.

In view of this background a study was initiated for the symptomatic BPH patients with co-morbid factors like extreme of age, uncontrolled diabetes, IHD in which a minimal resection of the median and lateral lobes of the prostate was performed until a free view into the bladder was achieved.

## MATERIAL AND METHODS

At the Department of Urology, Postgraduate Medical Institute, Lady Reading Hospital, Peshawar, 62 patients who presented with symptomatic BPH to out patient department were admitted. Symptomatic BPH was the inclusion criteria. Patients with carcinoma prostate were excluded from the study. All these

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patients have one or more co-morbid factors like extreme of age, uncontrolled diabetes, IHD, COPD which warrant the patients from prolonged general anaesthesia and open surgical trauma. All these patients were evaluated for lower urinary tract symptoms (LUTS), including physical examination, Digital Rectal Examination (DRE), renal parameters, Prostate Specific Antigen (PSA), ultrasonography, post-void residual urine, routine blood chemistry, urine analysis. A questionnaire comprising irritative and obstructive symptoms was given to the patients on the basis of American Urological Association (AUA) symptoms score. All patients were given spinal anaesthesia. Mean time of this procedure was forty five minutes. An average of 9-20gm of prostatic tissue was resected. In this procedure a minimal resection of the median and lateral lobes of the prostate was performed until a free view into the bladder was achieved when the tip of the telescope was placed just distal to the verumontanum. The follow up examination repeated at 6 months and 12 months and then at five years post-operatively. We relied on subjective scoring and ultrasound findings while the urodynamics facilities was not available in our set up.

## RESULTS

In this study 62 patients underwent M-TURP. These patients were evaluated with symptom analysis, post-void residual urine volume, urine analysis. Data were entered into SPSS version 10 and descriptive statistics were applied to different variables like post void residual urine and symptoms score.

During the follow up period (five years) five patients had died and another 8 patients were lost to follow up while 8 patients had undergone for a repeat M-TURP for their obstructive symptoms. Four patients had been treated for post-TURP urethral stricture (Figure-1). At the end of follow up period urinary stream was satisfactory in 45 patients. The irritative symptoms were appreciably reduced as well after M-TURP (Figure-2).

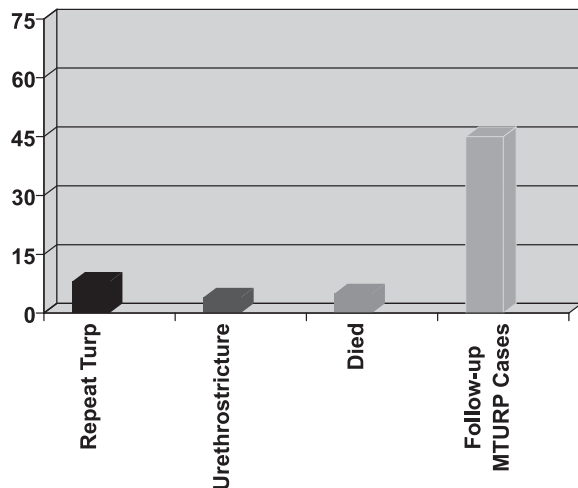


Fig. 1: Overall Review of M-TURP Cases n=62

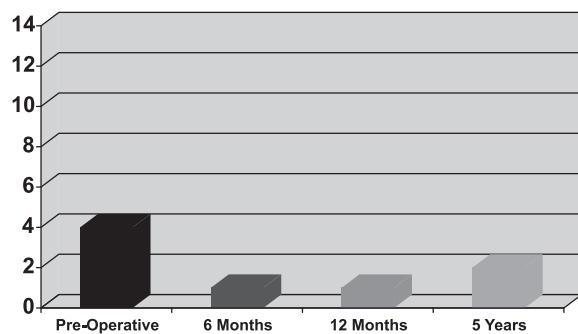


Fig. 2: Irritative Symptom Scores (Pre-operatively and at Follow up)

The post-void residual volume was significantly reduced (Figure-3). At the end of follow up period the post void residual volume was determined by ultrasound scan. M-TURP was repeated in eight patients. Four patients underwent for internal optical urethrotomy and intermittent self dilatation of urethral strictures.

## DISCUSSION

With the increasing percentage of local population over the age of 60 years we would expect a continuous rise in BPH cases. Transurethral resection of prostate (TURP) is one of the commonest operations done today for symptomatic BPH. In 1965, Lyton et al<sup>12</sup> estimated that the chance of a 40-year-old man having a prostatectomy in his life time

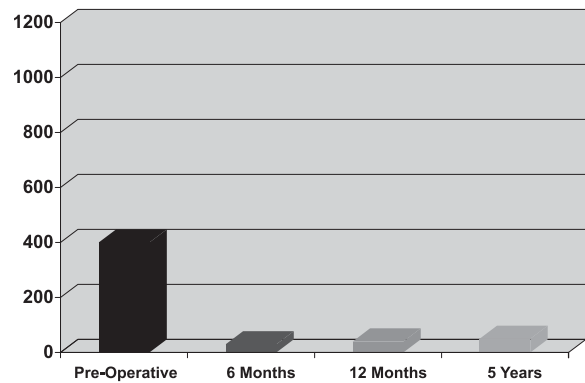


Fig. 3: Post-Void Residual Urine (Pre-Operatively and at Follow Up)

was approximately 10%. In 1985, Glyn et al<sup>13</sup> raised this figure to 29%. In a recent international review conducted by the American Urological Association (AUA), it was found that TURP is relatively safe procedure with a mortality rate of 0.2% and an overall morbidity of 18%.<sup>14</sup>

Mortality after TURP has decreased substantially during the past few decades to <0.25% in different series of studies.<sup>5,6</sup> This might mainly be due to advances in anaesthesia and to the technical improvements of TURP.<sup>7</sup> Hence this procedure is considered currently as the gold standard in the management of BPH.

Neilson et al<sup>15</sup> studied 84 patients before and after transurethral prostatectomy. Shortly after the operation the mean maximum flow rate had increased to 17.0ml/s and continued to increase to 19.6ml/s at 12 months. At 7 years the mean maximum flow rate had decreased to 12.2ml/s. However, only 23 patients were examined at the later follow up. In our study marked improvement in the urinary stream was found throughout the follow-up period. The symptom scores were reduced significantly and remained reduced throughout the follow up period.

M-TURP is an effective choice for the patients who have one or more co-morbid factors. This procedure has the significance of reducing the operative time, operative bleeding, surgical trauma, Hospital stay and late postoperative complication like urethral stricture. M-TURP significantly reduced obstructive as well as irritative symptoms. At 5 years follow up, it has been estimated that this procedure is more rewarding in reducing the obstructive symptoms, which is in accordance with the general opinion.

An annual rate of repeat TURP of approximately 5.5% up to 8 years after the primary operation<sup>16</sup> is acceptable. In our series the repeat M-TURP was performed in 6.45% of patients which is quite comparable to the international figures. The patients who underwent repeat M-TURP the median weight of resected prostatic tissue was 8-9 gram at the primary

operation. The post-operative urethral strictures reported by Hart and Fowler was 14%<sup>17</sup>, which is much higher than the 6% incidence reported by Lenz et al.<sup>18</sup> The occurrence of post M-TURP strictures diagnosed during the follow up period in our series were 6.45%. This finding is in contrast to that of other studies<sup>17,18</sup> where strictures developed a relatively shorter time after the primary operation.

## CONCLUSION

Minimal transurethral resection of prostate is rewarding procedure especially in patients with co-morbid factors, and it has excellent long term results.

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