

# Frequency of Sexual Dysfunction after Transurethral Resection of Prostate

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## ABSTRACT

**Objective:** To determine the frequency of sexual dysfunction after transurethral resection of prostate and frequency of factors leading to sexual dysfunction after transurethral resection of prostate (TURP). **Patients and Methods:** This study was carried out in the Department of Urology, Ghazi Khan Medical College, DG Khan during the period from January 2015 to June 2015. A total of 138 patients with benign prostatic hyperplasia were included in the study. **Results:** The mean age of the patients was  $61.33 \pm 7.03$  years. Most common factor leading to erectile dysfunction was older age (>60 years) found in 75 (54.3%) cases followed by capsular perforation which was evident in 19 (13.8%) patients. Frequency of erectile dysfunction after TURP was 13% in patients with benign prostatic hyperplasia. Out of total 75 older patients, 8 (10.7%) had erectile dysfunction after surgery. Out of the total 19 patients with capsular perforation, 7 (36.8%) had erectile dysfunction after surgery. **Conclusion:** Older age has no significant effect on the occurrence of erectile dysfunction while erectile dysfunction was significantly more in cases having capsular perforation.

**Keywords:** Benign prostatic hyperplasia, Lower urinary tract symptoms, Sexual dysfunction

## INTRODUCTION

**B**enign prostatic hyperplasia (BPH) is a progressive condition characterized by prostate enlargement accompanied by lower urinary tract syndromes (LUTS).<sup>1</sup> It contributes to, but is not the sole cause of LUTS. Several mechanisms seem to be involved in the development and progression of BPH. Although aging represents the central mechanism implicated, recent novel findings also highlighted the key role of hormonal alterations, metabolic syndromes and inflammation.<sup>2-4</sup> Benign prostatic hyperplasia is a non-malignant enlargement of the prostate that is due to excessive cellular growth of both the glandular and the stromal elements arising in the periurethral and transition zones of the gland. BPH may be due to a defect in the stromal component that normally inhibits cell proliferation, resulting in loss of normal braking mechanism for proliferation.<sup>5</sup>

The condition is very common in men over 40 years of age of all races and cultures. LUTS due

to bladder outlet obstruction (BOO) and sexual dysfunction are highly prevalent in aging men.<sup>6</sup> It was estimated that in the male population, a histological prevalence at autopsy of 50% in men aged 50-60 years and of 90% over 80 years was seen.<sup>7</sup> 75% of men >50 years old had symptoms arising from BPH and 20-30% of men reaching 80 years old required surgery.<sup>1</sup> Men affected by BPH may complain of difficulty initiating urination, incomplete bladder emptying, urinary urgency, weak urinary stream, dribbling or nocturia. One prevalence survey found that 42% of men over 50 years old had symptoms, although only one third of these intended to seek treatment.

Treatment options depend, in part, on the severity of symptoms and how bothersome they are. Options include watchful waiting (conservative or lifestyle management), physiotherapies, medical management, surgical procedures and minimally invasive therapies. One of the most commonly used surgical options is transurethral resection of prostate (TURP).<sup>8</sup> It is considered gold standard treatment

for BPH but is associated with number of complications; erectile dysfunction leading to sexual dysfunction is one of them. Erectile dysfunction is defined as persistent inability to achieve and/or maintain an erection sufficient for satisfactory sexual activity.<sup>9</sup> One of the possible mechanisms of post-TURP erectile dysfunction is direct thermal injury to the erectile nerves.<sup>10</sup>

The psychological effect of surgery, old age, late presentation with acute retention of urine and capsular perforation at TURP are among the risk factors quoted in previous studies.<sup>9,10</sup> In one study, postoperatively, 11 (10.6%) patients were found to have erectile dysfunction.<sup>11</sup> Major risk factors associated with sexual dysfunction following transurethral resection of the prostate include older age (18%)<sup>9</sup> and capsular perforation (21%).<sup>12</sup>

### PATIENTS AND METHODS

This study was carried out in the Department of Urology, Ghazi Khan Medical College, DG Khan during the period from January 2015 to June 2015. A total of 138 patients with benign prostatic hyperplasia were included in the study.

**Table 1: Age distribution with BPH in relation to outcome.**

Age (years)	No. of cases	No. of patients with erectile dysfunction after TURP	Percentage
45-54	25	3	12.0
55-64	62	10	16.1
65-75	51	5	9.8

### RESULTS

Age of presentation in majority of the patients 62 (44.9%) was 45-54 years and 51 (37%) patients between the age of 65-75 years. Most common factor leading to erectile dysfunction was older age (>60 years) found in 75 (54.3%) cases followed by capsular perforation which was evident in 19 (13.8%) patients. Frequency of erectile dysfunction after TURP was 13% in patients with benign prostatic hyperplasia. Out of the total 25 patients between 45-54 years (3 (12%)) had erectile

dysfunction after surgery (Table 1). Out of total 75 older patients (>60 years), 8 (10.7% had erectile dysfunction after surgery. Out of 19 patients with capsular perforation, 7 (36.8%) had erectile dysfunction after surgery (Table 2).

**Table 2: Factors leading to erectile dysfunction after TURP in relation to outcome.**

Factor	No. of cases	No. of patients with erectile dysfunction after TURP	Percentage
Older age	75	8	10.7
Capsular perforation	19	7	35.8

### DISCUSSION

Benign prostatic hyperplasia is the commonest disease of the urinary tract afflicting the aging male and is the commonest neoplastic disease in men aged 50 years and above. The incidence of LUTS secondary to benign prostatic obstruction is high and increases linearly with age.<sup>13</sup>

The objective behind surgical treatment of BPH is to eliminate bladder outlet obstruction with the lowest morbidity and the highest possible durability of improvement in symptoms and urinary flow. Despite the development of effective medical therapy for BPH and decline in frequency of TURP procedure in many countries over the past decade, TURP is still one of the most common interventions in elderly men.<sup>14,15</sup> TURP is a difficult procedure with a steep learning curve, because its safety demands efficient tumour resection within a limited time.<sup>16</sup>

Transurethral resection of the prostate is the ultimate treatment of choice for BPH due mainly to the preference of minimally invasive surgery, long term relief of symptoms and cost effectiveness. Operations whether open prostatectomy, transurethral resection of the prostate or transurethral laser resection of the prostate, will inevitably affect the sexual function of the patients. With the increased attention to patients' quality of life, more and more importance is being attached to the changes in post BPH sexual function. So far, it is unclear whether ED that follows prostatectomy is

operation specific or not. Only 86% of patients undergoing TURP retain potency compared to 97% after general surgical procedures<sup>17</sup> and ED occurs more commonly following TURP with capsular perforation.<sup>14,18</sup>

Present study was conducted to find frequency of sexual dysfunction following TURP in cases of benign prostatic hyperplasia. Mean age of the patients was 61.33±7.03 years. Age of presentation in majority of the patients (44.9%) was 55-64 years. Common factors leading to erectile dysfunction were older age (>60 years) 54.3% and capsular perforation 13.8%. Frequency of erectile dysfunction after TURP was 13%. Previous literature has shown variable results of sexual dysfunction after TURP. Our results are comparable with international studies. In a study it has been revealed that among 500 patients 45 (8%) reported poor potency following TURP. Failure of antegrade ejaculation was also reported in 5 (1%) patients. None of the patients developed complication like perforation.<sup>19</sup>

Solemani et al<sup>20</sup> reported that although not statistically significant, a higher incidence of postoperative erectile dysfunction following TURP in diabetic patients (37.5% vs 11.5%, P=0.073) was observed. Of the 20 patients who developed erectile dysfunction, 6 (60%) had capsular perforation, whereas only 7 out of the 117 postoperatively potent patients (6%) had capsular perforation (P=0.004).

### CONCLUSION

Older age has no significant effect on the occurrence of erectile dysfunction while erectile dysfunction was significantly more in cases having capsular perforation.

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