

TRANSURETHRAL RESECTION OF THE PROSTATE FOR BENIGN PROSTATIC HYPERPLASIA – A LOCAL REVIEW

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ABSTRACT

There has been a recent resurgence of interest in the role of transurethral resection of the prostate for benign prostatic hyperplasia in view of the introduction of new modalities.

We have conducted a retrospective analysis of 175 cases operated from October 1988 to June 1989 with an aim to ascertain the present mortality and morbidity rates associated with this procedure.

The main presenting symptoms were acute retention of urine (54%) and bladder outlet obstruction (33%). The average weight of the prostate resected was 24.2 gm and 3% of specimens revealed malignant changes on histology. Seventy-five percent of the patients have post-operative stay of 5 days or less. Urinary tract infection was the commonest complication (16%). Clot retention requiring re-scope occurred in 2% of our patients. Twelve percent (12%) of our patients developed acute retention post-operatively but only 2% required re-scope as the rest resolved conservatively. We had one mortality in our series as a result of post-operative pneumonia.

After 6 months follow-up, 4% complained of mild urinary incontinence and another 4% noted retrograde ejaculation. Six percent developed urethral strictures which required surgical treatment.

Three years after the procedure, we retrieved the case notes of our cohort to analyse long-term results. We note that ninety-eight percent of our patients were discharged after nine months follow-up. This includes the 4% who complained of mild stress incontinence at 6 months follow-up. The remaining 2% was discharged after 24 months because of recurrent urethral stricture. Only one patient presented with acute retention of urine because of bladder neck stenosis 3 years after the TURP which required bladder neck incision.

Keywords: transurethral resection, benign prostatic hypertrophy, morbidities.

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INTRODUCTION

Transurethral resection of prostate (TURP) has been the operation of choice for benign prostatic hypertrophy (BPH) for the past 50 years or so. There, however, has been a recent resurgence of interest in the role of TURP for BPH in view of the introduction of new modalities like microwave thermotherapy. The main question asked by urologists is whether these new modalities will overtake TURP as the gold standard treatment for BPH in the years to come. The aim of this paper is to re-evaluate this procedure and ascertain its current mortality and morbidity.

MATERIALS AND METHODS

At the Department of Urology, Singapore General Hospital, 222 patients underwent transurethral resection of the prostate between October 1988 to June 1989. After eliminating 47 patients (where malignancy was suspected pre-operatively or it was their second TURP), we have 175 patients for analysis in our series.

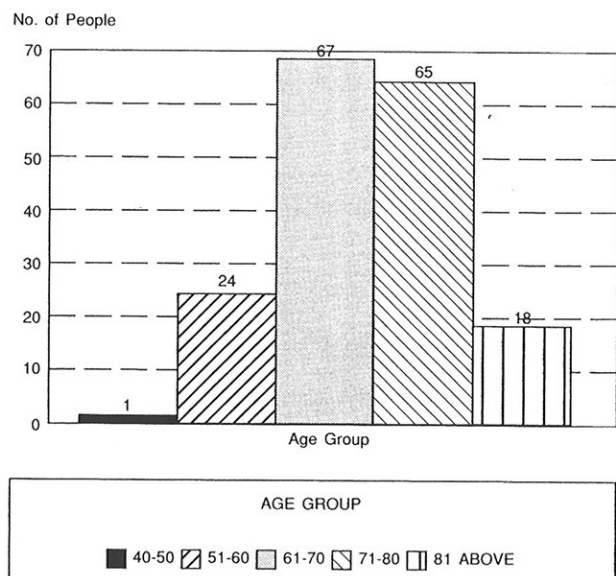
This is a collective experience of the department ranging from the registrars to the senior consultants. As such this

series reflect the whole range of urologists at different levels of expertise.

RESULTS

The majority of our patients (85%) were at least 60 years of age and only one patient was below 50 years. The average age in our cohort was 69.2 years old (Fig 1). With the increasing percentage of our local population reaching 60 years with time, we would expect a continual rise in this pathology.

Fig 1 - Age Distribution



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Clinical presentation of our patients has changed since the last local paper on TURP for BPH was published in 1980⁽¹⁾. Out of our series, only 54% (n = 96) presented with acute retention of urine compared with 78.6% in the previous series. Those who presented with just symptoms of bladder outlet obstruction before operation made up 33% (n = 59) in our series. There was still a significant percentage (10% or n = 19) who presented just with gross haematuria as their sole symptom. This is comparable with 6.5% in the 1980 paper. Interestingly, nearly half (9 out of 19) of these patients who presented with haematuria have associated bladder stones. Only one patient (0.6%) presented with overflow incontinence during this particular time span (Table I).

87.4% (n = 153) were given spinal anaesthesia for this

Table I - Presenting Symptoms

Symptoms	No	%
Acute retention of urine	96	54
Bladder outlet obstructing symptoms	59	33
Haematuria	19	10
Overflow incontinence	1	0.6

procedure. Average operative time was 44.8 minutes.

Seventy-two percent (n = 126) of our patients had less than 30gm of prostate resected, making up the average weight to be 24.2 gm.

Interestingly, 10% (n = 19) of our patients had associated bladder calculi, same as the 1980 series⁽¹⁾. Fifteen of these could be dealt with endoscopically and 4 required open surgery.

All 175 of our patients were assessed to have benign prostatomegaly pre-operatively. On histological examination, 156 (89%) were benign. Fourteen (8%) had evidence of prostatitis and only 5 (3%) were malignant.

It is the common practice in our department to remove catheter on the third or fourth post-op day and 75% of our patients in this series have post-operative stay of 5 days or less.

There was one mortality (0.6%) in this series. The cause of death in this elderly gentleman with known chronic obstructive lung disease was attributed to bronchopneumonia which he developed post-operatively and despite antibiotics and intensive care, he succumbed to this disease.

The commonest post-operative complication, urinary tract infection, was found in 29 of our patients (16%). The two commonest organisms grown were *E. Coli* and *Klebsiella* (found in 50% of our cases). These findings are similar to that found in the earlier series where UTI was noted in 24.2%. Our present departmental policy has been to give prophylactic antibiotics to all patients with indwelling catheters or previous instrumentations.

Sixteen patients (9%) developed retention when the catheter was removed on the 3rd/4th post-op day but only 2% required re-endoscopy and trimming of the prostate again, whilst the other 7% were able to pass without difficulty after conservative management.

Clot retention post TURP has not been a great problem with only 1.8% (n = 3) requiring cystodiathermy at the second sitting. Two of the 3 patients have glands weighing at least 60 gm, re-emphasising that this complication is more common in larger glands. We have no recorded complication of bladder perforation in all 175 patients (Table II).

Table II - Morbidity Rates

Complications	Percentage
Urinary tract infection	16%
Post-operative retention requiring endoscopy	2%
Clot retention requiring endoscopy	1.8%
Transurethral resection syndrome	2%
Epididymo-orchitis	1%
Chest infections	1%

Blood transfusion was required in 11% of our patients in this series as compared with 44% in the earlier series⁽¹⁾.

Transurethral resection or TUR syndrome was seen in only 3 patients (1.8%). We define patients to have this syndrome if they are disorientated post TURP with documented hyponatremia (Na < 130). All 3 patients recovered uneventfully. Not surprisingly, 2 of the patients had large glands requiring resection time of more than 120 minutes.

Epididymo-orchitis and chest infection occurred in 1% of our patients but all recovered with rest and antibiotics.

After six months, we still have 115 patients on follow-up, and of these, 86% have no complaints. Four percent (n = 9) of these patients developed urethral or bladder neck stricture and 7 of these required endoscopic treatment to correct this particular problem. Only 7 patients (4%) complained of retrograde ejaculation. This problem is probably under reported as most patients in our culture would not volunteer this information.

Three years after the procedure, we note that 98% of our patients were discharged after nine months follow-up. The remaining 2% was discharged after twenty-four months because of recurrent urethral stricture. Only one patient is still on follow-up as he presented with acute retention of urine because of bladder neck stenosis three years after the TURP which required bladder neck incision.

DISCUSSION

Transurethral prostatectomy is one of the commonest operations done today. In 1965, Lytton et al⁽²⁾ estimated that the chance of a 40-year-old man having a prostatectomy in his lifetime was approximately 10%. In 1985, Glynn et al⁽³⁾ raised this figure to 29%. In a recent national review of this procedure undertaken by the American Urological Association, it was found that TURP is a relatively safe procedure with a mortality rate of only 0.2% and an overall morbidity of 18%⁽⁴⁾.

This has also been our experience with this procedure. Bearing in mind, in our series the surgeons range from the registrars to the senior consultants, we report a 0.6% mortality (from post-op pneumonia) and minimal morbidity. Urinary tract infection was in the late 1970's and still is, as seen in our series, the commonest post-operative complication (16%). We presently advocate prophylactic antibiotics for all patients with indwelling catheters or previous instrumentations. Not surprisingly post-op morbidity like clot retention, intraoperative bleeding requiring blood transfusion and TUR syndrome occurred in patients with large glands (>45 gm) and associated with longer operating time (>90 mins). Not only are our results similar to those found in the national review by the American Urological Association but our cohort is also similar in terms of average age (69.2 vs 69) and average weight of prostate resected (24.2 g vs 22 g).

From our series less people presented with acute retention of urine (54%) as compared with the late 70's (78.6%)^(1,5-7). This reflects the growing awareness of both patients and doctors to the increasing incidence of this pathology in our ageing population. We expect the figure to drop even further with time to approach the 27% reported in the American series⁽⁴⁾. Only 3% have histological proof of malignancy even though pre-operative per-rectal examination was assessed to be benign.

The majority of our patient (98%) were discharged from follow-up by 9 months as would be expected from a benign pathology like benign prostatic hypertrophy. We report a 6% incidence of bladder neck contracture and/or urethral stricture requiring surgical treatment quite similar to the 5.2% reported in the American series⁽⁴⁾. Four percent had mild stress incontinence at 6 months which resolved by 9 months follow-up and no reported cases of total incontinence. As a point of interest, we retrieved all the casenotes of our cohort at mean 3 years after TURP and found only one patient still requiring surgical intervention for second episode of bladder neck contracture.

Transurethral resection of the prostate is still an effective and safe procedure for BPH.

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