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Original Research

Surgical outcome of cases of benign prostatic hyperplasia

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ABSTRACT:

Background: Benign prostatic hyperplasia (BPH) represents an increase in the total number of stromal and epithelial cells within the prostate gland. The present study was conducted to assess surgical outcome of cases of benign prostatic hyperplasia. **Materials & Methods:** This study was conducted on 104 patients of benign prostatic hyperplasia. Preoperatively, all patients were subjected to prostate ultrasounds and prostate-specific antigen (PSA) levels. Patients underwent surgical removal of prostate. The presence of co-morbidities and urologic and non-urologic complications were recorded. **Results:** Age group 20-40 years had 15, 40-60 years had 37 and >60 years had 52 patients. The difference was significant ($P < 0.05$). Common complications were acute renal failure in 2, myocardial infarction in 1, urethral stenosis in 5 and urinary fistula in 8 cases. Open prostatectomy (OP) was done in 64 and transurethral resection of the prostate in 40 cases. The difference was significant ($P < 0.05$). **Conclusion:** Authors found that benign prostatic hyperplasia is common in males and surgical management includes open prostatectomy and transurethral resection of the prostate.

Key words: Benign prostatic hyperplasia, open prostatectomy, urethral stenosis

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INTRODUCTION

Lower urinary tract symptoms caused by benign prostatic hyperplasia are the most common urological problem among men, affecting about a third of men over age 50. Benign prostatic hyperplasia (BPH) represents an increase in the total number of stromal and epithelial cells within the prostate gland.¹ It is associated with bothersome lower urinary tract symptoms that affect the individual's quality of life and interfere with day-to-day activities. BPH is now one of the most common diseases in the elderly. According to histological studies, more than 50% of men will face this diagnosis by the age of 60 (90% by the age of 85).² BPH may cause physical compression of the urethra and result in anatomic bladder outlet obstruction (BOO) through two distinct mechanisms: First, an increase in prostate volume, termed the static component; second,

an increase in stromal smooth muscle tone, termed the dynamic component. BOO, in turn, may present clinically as lower urinary tract symptoms (LUTS), urinary tract infections, acute urinary retention (AUR), renal failure hematuria, and bladder calculi.³

Surgical intervention is the most effective treatment for benign prostatic hyperplasia, with around 100 000 procedures carried out annually.⁴ Of all surgical treatments, monopolar transurethral resection of the prostate (TURP), in which the enlarged prostate tissue is resected piece by piece using a monopolar electrode, has been the preferred method since the 1970s. It can substantially improve the maximal flow rate (Qmax), urinary symptoms (based on the international prostate symptom score (IPSS)), and health related quality of life, with long term efficacy compared with drugs or other minimally invasive treatments.⁵ The present study

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was conducted to assess surgical outcome of cases of benign prostatic hyperplasia.

MATERIALS & METHODS

Present study comprised of 104 patients of benign prostatic hyperplasia. Patients were informed regarding the study and written consent was taken. Ethical approval was obtained prior to the study.

Patient information such as name, age, gender etc. was recorded. Preoperatively, all patients were subjected to prostate ultrasounds and prostate-specific antigen (PSA) levels. Patients underwent surgical removal of prostate. The presence of co-morbidities and urologic and non-urologic complications were recorded. Results thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Age group (Years)	Number	P value
20-40	15	0.01
40-60	37	
>60	52	

Table I shows that age group 20-40 years had 15, 40-60 years had 37 and >60 years had 52 patients. The difference was significant (P< 0.05).

Graph I Distribution of patients

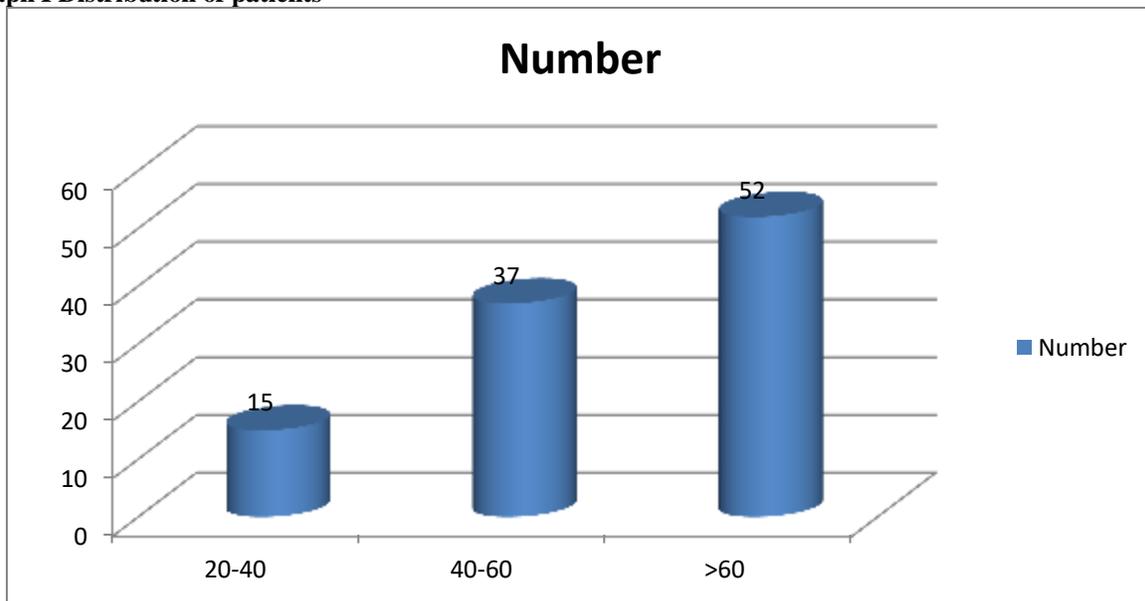


Table II Complication of surgery

Complications	Number	P value
Acute renal failure	2	0.01
Myocardial infarction	1	
Urethral stenosis	5	
Urinary fistula	8	

Table II, graph II shows that common complications were acute renal failure in 2, myocardial infarction in 1, urethral stenosis in 5 and urinary fistula in 8 cases. The difference was significant (P< 0.05).

Graph II Complication of surgery

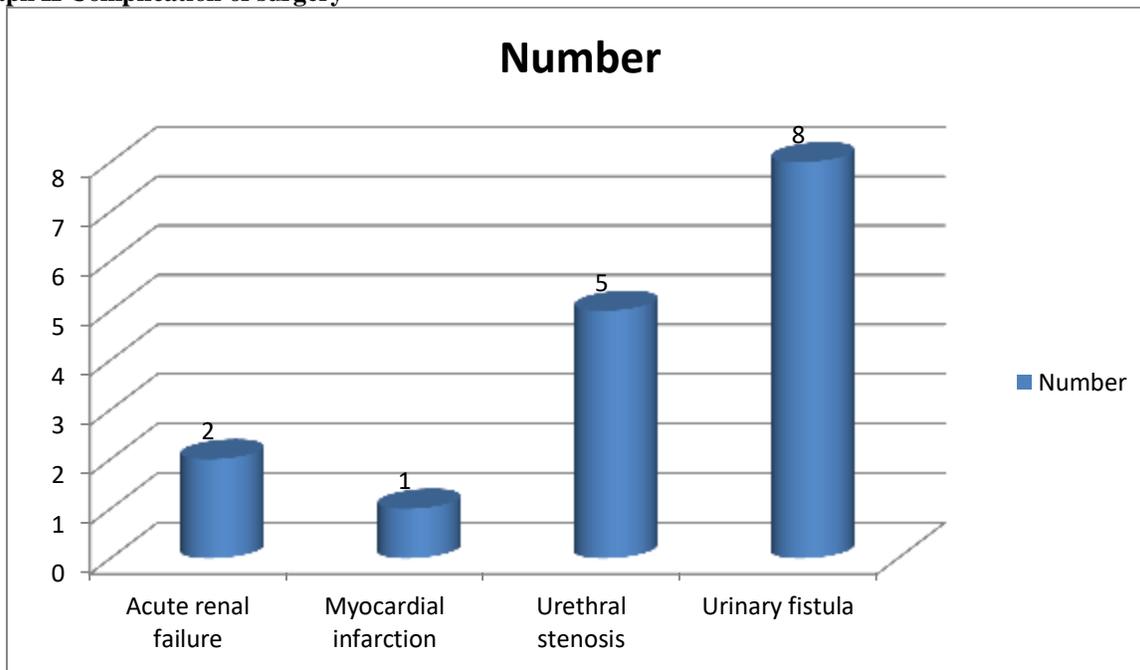


Table III Treatment given

Treatment	Number	P value
Open prostatectomy	64	0.05
Transurethral resection of the prostate	40	

Table III shows that open prostatectomy (OP) was done in 64 and transurethral resection of the prostate in 40 cases. The difference was significant ($P < 0.05$).

DISCUSSION

Benign prostatic hyperplasia (BPH) refers to the nonmalignant growth of the prostate observed very commonly in aging men. Although on the surface this statement seems straightforward and simple, there are considerable definitional problems associated with the condition that subsequently lead to problems with epidemiologic definitions, calculations of incidence and prevalence rates, and, ultimately, difficulties with formalizing therapeutic algorithms.⁶ BPH, the actual hyperplasia of the prostate gland, develops as a strictly age-related phenomenon in nearly all men, starting at approximately 40 years of age. In fact, the histologic prevalence of BPH, which has been examined in several autopsy studies around the world, is approximately 10% for men in their 30s, 20% for men in their 40s, reaches 50% to 60% for men in their 60s, and is 80% to 90% for men in their 70s and 80s. No doubt, when living long enough, most men will develop some histologic features consistent with BPH.⁷ The present study was conducted to assess surgical outcome of cases of benign prostatic hyperplasia.

In present study, age group 20-40 years had 15, 40-60 years had 37 and >60 years had 52 patients. Common

complications were acute renal failure in 2, myocardial infarction in 1, urethral stenosis in 5 and urinary fistula in 8 cases. Marmioli et al⁸ analyzed patient age, prostate volume, prostate-specific antigen level, international prostatic symptom score, quality of life score, urinary retention, co-morbidities, surgical technique and satisfaction with treatment. Median age was 79 years. Forty-eight patients had undergone transurethral prostatic resection of the prostate, and 52 had undergone open prostatectomy. The median International Prostatic Symptom Score was 20, the median prostate volume was 83 g, 51% were using an indwelling bladder catheter, and the median prostate specific antigen level was 5.0 ng/ml. The most common comorbidities were hypertension, diabetes and coronary disease. After a median follow-up period of 17 months, most patients were satisfied. Complications were present in 20% of cases. The most common urological complication was urethral stenosis, followed by bladder neck sclerosis, urinary fistula, late macroscopic hematuria and persistent urinary incontinence. The most common clinical complication was myocardial infarction, followed by acute renal failure requiring dialysis. Incidental carcinoma of the prostate was

present in 6% of cases. One case had urothelial bladder cancer.

We found that open prostatectomy (OP) was done in 64 and transurethral resection of the prostate in 40 cases. Platz et al⁹ followed 9628 men for progression of LUTS over 18 years based on I-PSS and observed that the incidence and progression rates of LUTS increased steeply as the men aged, with progression rates being higher than incidence rates.

Laser therapies are also surgical alternatives that might be considered for high-risk surgical patients. Among these, the photoselective vaporization of the prostate with the Green Light laser and holmium laser enucleation of the prostate are the two most performed methods. Both techniques are associated with shorter catheter time and hospital stay. Studies with a longer follow-up are necessary to establish the role of laser techniques in the surgical treatment of BPH.¹⁰

CONCLUSION

Authors found that benign prostate hyperplasia is common in males and surgical management includes open prostatectomy and transurethral resection of the prostate.

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