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ANALYSIS OF MODE OF PRESENTATION AND POST-OPERATIVE OUTCOME IN BENIGN PROSTATIC HYPERPLASIA

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Abstract:
Introduction: *Benign Prostatic Hyperplasia (BPH) and its related signs and symptoms are extremely common among elderly men, suggesting it to be a natural concomitant of aging.* ***Objectives:*** *The main objective of the study is to analyse the mode of presentation and post-operative outcome in benign prostatic hyperplasia.* ***Material and methods:*** *This descriptive study was conducted in Rashid Latif Medical College during March 2019 November 2019. In addition to mode of presentation of BPH, age of the patients, weight of resected prostatic tissues and results after trial without catheter (TWOC) were recorded. Four modes of presentation of BPH were defined: lower urinary tract symptoms (LUTS), acute retention, chronic retention and acute on chronic retention.* ***Results:*** *The data was collected from 345 patients. All patients who presented with LUTS had severe lower urinary tract symptoms (I-PSS >20). Patients who presented with urinary retention had acute retention 129 (37.4%), chronic retention 81 (23.5%) and acute on chronic retention 60 (17.4%). One patient, who initially presented with acute retention, underwent revision TURP at 10th day of the initial TURP procedure. In this patient the initial procedure was terminated incompletely because of perforation of prostatic capsule and opening of large venous sinuses early in the procedure.* ***Conclusion:*** *It is concluded that BPH patients in our region present very late, most of them (>78%) with complication of urinary retention. Mode of presentation of BPH greatly influences the postoperative outcome of this disease.*

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INTRODUCTION:

Benign Prostatic Hyperplasia (BPH) and its related signs and symptoms are extremely common among elderly men, suggesting it to be a natural concomitant of aging. This is especially true in our region with less health awareness where bothersome lower urinary tract symptoms (LUTS) in aging men are taken for granted as old age sequelae. Scarce health resources and economic constraints cause further delay in presentation and treatment. In western world more than 90% patients of BPH are treated based on symptoms severity and the degree to which a patient is bothered by his symptoms. In contrast to this 70- 80% patient of BPH in developing countries seek medical advice only when they get complications of the disease [1].

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. Surgical intervention is the most effective treatment for benign prostatic hyperplasia, with around 100 000 procedures carried out annually in the United States [2].

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 [3].

However, monopolar TURP is a risky procedure because of the likelihood of severe complications such as massive bleeding or transurethral resection syndrome. Therefore, minimally invasive surgical techniques need to be developed with outcomes similar to those of monopolar TURP, but with fewer side effects. Open prostatectomy has been the operative treatment for benign prostatic enlargement for several decades until the advent of transurethral resection of the prostate TURP (the gold standard) and other state-of-the act modalities like transurethral interstitial LASER ablation, thermotherapy, and needle ablation [4]. This led to the gradual reduction in open prostatectomy in the developed world. In the developing countries, however, skills in traditional open surgery are mandatory, because the patients present late with very large prostates. A gland that is too large and completely obscuring the trigone and the ureteric orifices will not be comfortably resected transurethrally. Most urologists are comfortable with removing glands in the range of 50–75 g, transurethrally open surgery is, therefore, recommended for larger glands. Comorbid medical conditions and complications of BPH at presentation are also indications for open prostatectomy [5].

Objectives

The main objective of the study is to analyse the mode of presentation and post-operative outcome in benign prostatic hyperplasia.

MATERIAL AND METHODS:

This descriptive study was conducted in Rashid Latif Medical College during March 2019 November 2019. In addition to mode of presentation of BPH, age of the patients, weight of resected prostatic tissues and results after trial without catheter (TWOC) were recorded. Four modes of presentation of BPH were defined: lower urinary tract symptoms (LUTS), acute retention, chronic retention and acute on chronic retention. Routine ultrasound examination of kidneys and bladder to assess postvoid residual urine volume was obtained in patients presenting with lower urinary tract symptoms (LUTS) and all patients in this diagnostic category had a postvoid residual urine less than 500ml. The definitions for retention of urine were based on those used by Hamm & Speakman11 and the residual urine volumes recorded were those drained by catheterization at initial presentation. Complete medical history was taken for all patients and International Prostate Symptoms Score (I-PSS) questionnaire was filled for those presenting with lower urinary tract symptoms (LUTS).

The data was collected and analysed using SPSS version 18.0. All the values were expressed in mean and standard deviation.

RESULTS:

The data was collected from 345 patients. All patients who presented with LUTS had severe lower urinary tract symptoms (I-PSS >20). Patients who presented with urinary retention had acute retention 129 (37.4%), chronic retention 81 (23.5%) and acute on chronic retention 60 (17.4%). One patient, who initially presented with acute retention, underwent revision TURP at 10th day of the initial TURP procedure. In this patient the initial procedure was terminated incompletely because of perforation of prostatic capsule and opening of large venous sinuses early in the procedure. However this patient voided successfully following TWOC 48 hours after the second TURP. So for the purpose of subsequent analysis he was included in the "successful TWOC" group. All patients presenting with LUTS voided successfully following TURP. Seven (5.4%) out of 129 patients with acute retention, 11 (13.6 %) of 81 patients with chronic retention and 9 (15.0%) of 60 patients with acute on chronic retention failed to void on catheter removal.

Table 1. Outcome related to mode of presentation.

	Mode of presentation	Successfully voided after TWOC*	Failed to void after TWOC	P-value
1.	LUTS**	75	0	
	Vs			0.0487
	Acute retention	122	7	
2.	Acute retention	122	7	
	Vs			0.0461
	Chronic retention	70	11	
3.	Acute retention	122	7	
	Vs			0.0458
	Acute on chronic retention	51	9	
4.	Any type of retention	243	27	
	Vs			0.0013
	LUTS	75	0	

*Trial without catheter
** Lower urinary tract symptoms.

The mean age of the patients who voided successfully was 64.7 + 9.2 years and those who did not was 66.4 + 8.6 years. So the difference in age between the two groups was not statistically significant (P>0.05). Similarly there was no significant difference (P>0.05) in weight of resected prostatic tissues in the successful voiders (mean 28.6 + 15.8grams) versus the unsuccessful group (mean 31.2 + 18.4 grams.

Table 2. Outcome related to age and weight of prostate (resected).

	Patients who voided successfully after TWOC* (n=318)	Patients who failed to void after TWOC (n=27)	
1.	Age (years) mean ± SD	Age (years) mean ± SD	P-value
	64.9 11.3	66.1 9.7	0.5929
2.	Weight of prostate (grams) mean ± SD	Weight of prostate (grams) mean ± SD	
	28.7 15.8	31.2 18.4	0.4366

*Trial without catheter

DISCUSSION:

The clinical features of BPH are the same with other studies; however the complications at presentation are in sharp contrast to what is obtainable in developed countries where recurrent urinary retention predominates. Haemorrhage, very huge prostates, associated with diverticuli, bladder stones, and impaired renal function which are all features of late presentation are common in the developing countries [6,7]. In addition to late presentation is the prevalence of comorbid medical conditions like hypertension and diabetics. The combination of the above factors is a major indication for open surgery, even where there are facilities for modern minimal access techniques [8]. Massive persistent haemorrhage in BPH is a fairly common and life-threatening complication at presentation in this study; there were 37 (14.6%), lower than that reported by Ramyil et al. These patients were managed by emergency transvesical prostatectomy, which is a safe procedure that allows for direct control of haemorrhage. Other methods employed in dealing with bleeding prostates include continuous bladder irrigation, bladder instillations, and selective arterial prostatic embolization [9].

Clot retention and wound infection were the major postoperative complications in this series

comparable to similar studies. Transient incontinence, a well-known complication especially in transvesical prostatectomy, was comparable to other similar series; however, the incidence of retrograde ejaculation was low. This may be attributed to the cultural barrier or inhibition of volunteering such information [10]. The low mortality rate of 0.4% is in keeping with current trend of decreasing mortality from major urological procedures.

CONCLUSION:

It is concluded that BPH patients in our region present very late, most of them (>78%) with complication of urinary retention. Mode of presentation of BPH greatly influences the postoperative outcome of this disease. Patients presenting with complications of chronic and acute on chronic retention have less favourable results regarding postoperative voiding after TURP. Moreover, age of the patients and weight of the prostate are not significant factors in relation to failure to void postoperatively.

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