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Open Prostatectomy among Elderly Patients at The University of Maiduguri Teaching Hospital, North Eastern Nigeria.

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ABSTRACT:

Background: The elderly, 80 years and above are increasingly being seen in clinical practice presenting with benign prostatic hyperplasia more often late with high rate of complications at presentation, larger prostates, coupled with intercurrent medical conditions related to aging and in an environment lacking facilities and expertise for minimally invasive procedures. **Objectives:** To review the presentation, management and outcome of open prostatectomy for benign prostatic hyperplasia in elderly patients 80years and above. **Materials and Method:** Elderly patients 80-years and above that underwent open prostatectomy in the University of Maiduguri Teaching Hospital (UMTH) between January 2001 and December 2010 were studied. Data were obtained from clinical notes and laboratory records and analysed.**Results:** Sixty-two patients, aged 80 to 116 years were reviewed. Duration of symptoms ranged from 6 to 168 months with a mean of 25 months. Major symptoms at presentation were urinary frequency in 57 patients (91.9%), poor urinary stream in 55 (88.7%) and difficulty in passing urine in 39 (62.9%) while 30(48.4%) presented with acute retention. Complications at presentation were hernia in 19 (30.6%), urolithiasis 16 (25.8%), haemorrhoids 13 (21%), UTI and impaired renal function 12 (19.4%) each. Intercurrent medical conditions at presentation were hypertension / cardiomyopathy in 27 (43.5%), arthritis 13 (21%), Parkinsonism 8 (12.9%) and diabetes mellitus 6 (9.7%).**Conclusion:** Open prostatectomy in the elderly despite late presentation, intercurrent medical conditions and larger prostates is still very safe with associated low morbidity and mortality provided patients are optimised.

Key Words: Elderly, Open Prostatectomy, Morbidity

Introduction: The developing world is witnessing a gradual but progressive rise in life expectancy with its attendant increase in the population of senior citizens (80years and above). This increase in the elderly population is also associated with increase health care needs [1, 2]. Benign prostatic hyperplasia is a disease of the aging male hence the increase in the demand for prostatectomy in the elderly. In developed countries Endoscopic minimally invasive techniques such as Laser ablation, transurethral vaporisation , transurethral needle ablation, and Transurethral Resection of the prostate (TURP) are the main stay in treating benign prostate enlargement[3,4,5,6]. Open prostatectomy still occupies a prime place in developing world due to lack of expertise and facilities, late presentation with complications and associated co morbid conditions all of which are indications for open prostatectomy[7] . This study is justified by the increasing number of elderly patients often with comorbid conditions presenting with BPH to our centre. Such patients undergo open prostatectomy in our environment due to lack facilitities for minimally- invasive techniques.

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Materials and methods

For the purpose of this study, the elderly is defined as persons of age 80years and above. A total of 73 elderly patients had open prostatectomy for BPH over the study period of which 11 were excluded from the study (retrieval rate of 85%). Sixty-two elderly patients that underwent open prostatectomy in the University of Maiduguri Teaching Hospital (UMTH), north eastern Nigeria, between

January 2001 and December 2010 were studied. The study was approved by Research and Ethics Committee of the hospital. Eleven patients were excluded due to incomplete information. All patients with histological diagnosis of BPH and complete information were included. Data were obtained from clinical notes and laboratory records and analysed using SPSS version 18. All patients were optimised by control of diabetes/hypertension by specialists in multidisciplinary approach, anaemia corrected, urinary tract infection treated based on culture and sensitivity, and electrolytes derangements were corrected. Prophylactic antibiotics (Ceftriaxone and Metronidazole) were given at induction. Anaesthesia was either regional or general. Most patients had transvesical technique with Malament stitch (removed within 48 hours) while others had retropubic approach with posterolateral (Harris) suture to minimise blood loss.

Results

Sixty-two patients aged 80 to 116 years, with a mean age of 85.8± 6.3years were studied. (Table 1). Duration of symptoms ranged from 6 to 168 months with a mean of 25 months. Major symptoms at presentation were urinary frequency in 57 patients (91.9%), poor urinary stream in 55 (88.7%) and difficulty in passing urine in 39 (62.9%) while 30(48.4%) presented with acute retention. (Table 2) Complications at presentation were hernia in 19 (30.6%), urolithiasis 16 (25.8%), haemorrhoids 13 (21%), UTI and impaired renal function 12 (19.4%) each. (Table 3). Intercurrent medical conditions at presentation were hypertension/ cardiomyopathy in 27 (43.5%), arthritis 13 (21%), Parkinsonism 8 (12.9%) and diabetes mellitus 6 (9.7%).

Forty-six patients 46(74.2%) had spinal while 16(25.8%) had general anaesthesia. Similar ratio was found in the techniques with transvesical 46(74.2%) while 16(25.8%) had retropubic approach. Intra-operative findings were bladder wall hypertrophy in 34(54.8%), travaculations/sacculation 18(29%), diverticuli 16(25.8%), and bladder stones 14(22.6%).

The prostate was globally enlarge in 51(82.3%) patients, isolated median lobe enlargement 7(11.3%) while 3(4.8%) had fibrotic prostate. Out of the 62 patients, 45 were weighed, of which 13 (28.9%) weighed less than 100g, Eighteen (40%) between 100-199g, and 200g and above in 14(31.1%). The weight ranged from 64 to 403g with a mean of 123g. Operating time ranged from 47 to 93 minutes with an average of 70 minutes. Estimated blood loss (from suction jar and soaked gauze weighing) was 100 to 230ml with an average of 165ml.

Histology was benign in 57(91.9%), nodular hyperplasia with focus of malignancy in 5(8.1%), [3 adenocarcinoma and 2 PIN III].

Post operative complications were wound infection in 6(9.7%), clot retention 5(8.1%), transient incontinence and vesicocutaneos fistula 4(6.4%) each. (Table 4)

There was 1(1.6%) death, on the 8th post operative day as a result of Deep Vein Thrombosis and Pulmonary Embolism. Hospital stay ranged from two to eight weeks with a mean of three weeks.

Patients were followed up for a period of Three months to Three years with a mean of Thirteen months.

Table 1: Age distribution

Age (years)	Frequency
80-84	31(50%)
85-89	13(21%)
90-94	13(21%)
95-99	4(6.4%)
>100	1(1.6%)
Total	62(100%)

Table 2: Symptoms at presentation

Symptoms	Frequency
Urinary frequency	57(91.9%)
Poor stream	55(88.7%)
Difficulty in passing urine	39(62.9%)
Urgency/Urge incontinence	37(59.7%)
Nocturia	36(58.1%)
Incomplete bladder emptying	36(58.1%)
Acute urinary retention	30(48.4%)
Hesitancy	25(40.3%)
Post void dribbling	24(38.37%)
Haematuria	13(21.0%)
Others:	
overflow incontinence	6(9.7%)
fever	11(17.7%)
loin pains	9(14.5%)
facial/leg swelling	5(8.1%)
hiccups	4(6.5%)
cough	3(4.8%)

Table 3: Complications at presentation

Complication	Frequency
Hernia	19(30.6%)
Urinary tract stones	16(25.8%)
Haemorrhoids	13(21.0%)
Urinary tract infections (UTI)	12(19.4%)
Renal impairment	12(19.4%)
Bleeding	11(17.7%)
Hydrocele (incidental finding)	10(16.1%)
Hydronephrosis	6(9.7%)

Table 4: Post operative complications

Post operative complications	Frequency
Wound infection	6(9.7%)
Clot retention	5(8.4%)
Transient incontinence	4(6.4%)
Vesicocutaneous fistula	4(6.4%)
Chest infection	5(8.4%)
Urinary tract infection	5(8.4%)
Epidedimoorchitis	4(6.4%)
Others:	
Cardiac failure	3(4.8%)
Irritable bladder syndrome	3(4.8%)
Renal failure	2(3.2%)
Scrotal haematoma	2(3.2%)
Bladder neck stenosis	1(1.6%)

Discussion

In the developing world where there are no institutional care for senior citizens with intercurrent medical conditions, coupled with low socioeconomic status and delay in presentations with attendant complications; open prostatectomy is still the most viable option. Our study found that over 90% of the patients were between 80 and 94years which is similar to a study by kurokawa et al.[8] The predominant symptoms of urinary frequency, poor stream, difficulty in passing urine and acute urinary retention found in this study are similar to those reported in younger patients. However overflow incontinence at presentation is not so common in BPH patients younger than 80 years [9]. Complications at presentation such as groin hernia from straining and urinary tract stones from stasis/infection, bladder diverticulae and hydronephrosis are similar to the findings in younger patients. [9,10] Though renal impairment and obstructive uropathy are common complications of BPH, this study found a higher incidence in the elderly. This could be due to delayed presentation and intercurrent medical conditions like diabetic and hypertensive nephropathy.[11] In keeping with high incidence of hypertension, cardiomyopathy and other intercurrent medical conditions associated with the elderly globally, this study found the same trend.[12] This calls for prudent and meticulous management and control to optimise patients for safe surgery.The study found that elderly patients, especially with delayed presentations tend to have larger prostate similar to a previous study.[13,14]

Our study found spinal anaesthesia very safe in the elderly with general anaesthesia reserved for those with spondylosis or the anaesthetist's discretion.

Transvesical approach was adopted in patients that had large intravesical prostatic component, diverticulae, and bladder stones in order to deal with this effectively. Intraoperative blood loss was minimised by meticulous primary haemostasis and placement of Harris suture in the retropubic approach, and Malament stitch in the transvesical technique. This could explain the minimal blood loss of 100 to 230ml with a mean of 165ml. This is in agreement with a previous study.[15]

The postoperative complications found in his study are higher than what was reported in younger patients. [16] This is possibly due to poor wound healing in diabetic and hypertensive, the incidence of which are high among our patients. However notable post operative complications in this study which were peculiar to this age group are . Post operative chest infection 5(8.1%), cardiac failure 3(4.8%) and renal failure 2(3.2%). The 2 renal failure patients aged 84, and 87 years respectively were hypertensive and had spinal anaesthesia. Renal failure improved after two sessions of haemodialysis. The only mortality recorded in our study was a result of pulmonary embolism. Deep Vein Thrombosis and Pulmonary embolism are not uncommon complications of major pelvic operations.[17]

The mean hospital stay in our study of three weeks was longer than what was reported for open prostatectomy in younger patients[18] .This may be due the time taken in optimising the patients with co morbid medical conditions.

In conclusion, open prostatectomy in the elderly despite late presentation, intercurrent

medical conditions and larger prostates is still very safe with associated low morbidity and mortality provided patients are optimised. Multidisciplinary approach is quite rewarding though at a cost of prolonged hospital stay.

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