

# Epidemiological, Clinical and Management of Benign Prostatic Hypertrophy in Urologie Department in N'Djamena, Chad

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## Abstract

**Aim:** To determine the epidemiological, clinical, paraclinical characteristics and assess the result of surgical treatment of benign prostatic hyperplasia (BPH) in the urological department. **Patients and Method:** It is a retrospective descriptive study of 757 patient samples whose BPH diagnosis was pronounced and have benefited of the open surgery in urology department from January 2006 to December 2010. The variables studied were sociodemographical, clinical, paraclinical, therapeutical and the follow up. Those variables were: arterial tension, sonography, consultation reasons and hospitalization, the data provided rectal touch, the comorbidity, the prostatic specific antigen (PSA), other blood tests, urinary tests, medical management surgical treatment, the causes of death and the complications. **Results:** during the study period, 2406 patients were hospitalized, from them 1472 (61.18%) for low urinary tract diseases where 757 for BPH. The mean age was 64.18 years. The acute urine retention was the main cause of hospitalizations and consultations (51.51%). The rectal touch Helped in diagnosing 96.43% of cases. PSA in 74.10%, the sonography evaluated the volume of the prostate and the complications on the upper urinary tract, kidney dilatation and stones. An urgent evacuation of acute retention of urine in the bladder was done in 74.10%, a medical treatment was done in 33.47%. The open surgery was done in 66.47%. The evolution was good for 703 (92.86%), 54 died (7.14%) and the causes were various (anemia, hyperglycemia, HIV...). **Conclusion:** The BHP was the first reason of consultation and hospitalization in urology department in N'Djamena. Its diagnosis was done after the analysis of a beam clinical and paraclinical arguments. In the absence of an endoscopic resection column,

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open surgery was the only surgical treatment.

## Keywords

Benign Prostatic Hyperplasia, Prostate, Urology, X Ray, Surgery

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## 1. Introduction

Benign prostatic hyperplasia (BPH) is a benign tumor which is developed from the prostate gland [1]. Its etiology is not clearly known, despite many researches on it. But its hormonal dependence on testosterone is undeniable. In the world, BHP is the main cause of pathologies of the lower urinary tract in men. The incidence of the BHP in male increases according to age, from 40 years old (2.7%) to 80 years (50%) [2] [3] [4] [5]. The symptomatology of the BHP is not specific but it is the same for all urine troubles in lower urinary tract. The diagnosis of BPH is based on the clear analysis of a wide beam of clinical and paraclinical arguments [6]. The recent discovery of PSA (prostate specific antigen) is the most important time in the etiological BHP diagnosis [7]. The gold standard of the surgical treatment of the BPH is the transurethral resection of the prostate (TURP) despite this, the open surgery has its place in the surgical arsenals (treatment) in many African countries that do not have an endoscopic column and even in European countries when the prostate weight is greater than 100 grams.

The main objective of this study is to determine the epidemiological, clinical, paraclinical characteristics and assess the result of surgical treatment of BHP in the department of urology in N'Djamena, Chad.

## 2. Patients and Methods

The study was retrospective, descriptive and was done from January 2006 to December 2010 in the urology department of National General Referral Hospital of N'Djamena in Chad. There were 1472 patients with lower urinary tract pathologies and the diagnosis of BHP was retained for 757 of them. We collected the data from: folders of investigations, patient's registers, hospital and surgical records.

The patients were either directly consulted in urology or referred by a colleague. It was excluded from the study that, those who were not followed up the urology department and those whose hospitalization records were incomplete. Were included, patients who have been suffering of BHP and who were followed up in the urology department. Before beginning the study, we had obtained the authorization from the head of the faculty of Health, Science of the University of N'Djamena in Chad, from the national comity of ethics, from the headquarters of the hospital and from the head of department of urology. We also obtained the agreement of the patients before including them into the study and using their pictures only for illustration in order to improve the scientific research.

The variables studied were: Epidemiological and social: age, profession, residence, marital status; number of wives. Clinical variables: motive of consultation, duration of symptomatology, evaluation of general health, presence of the bladder globe, data of rectal touch. Paraclinical variables: blood test (PSA, hemoglobin and hematocrit; creatininemia; glycaemia); urinary test and ultrasound). Therapeutic variables: emergency medical or surgical gesture, medical or surgical treatment. Evaluative variables were: recovery, causes of complications and deaths. The data were exploited with Word and Excel.

### 3. Results

The frequency of the BHP was 51.42% (n = 757). The mean age was 64.18 [40 and 105]. The patients in the range age of [51 - 60], [61 - 70] and [71 - 80] suffered more, respectively in the proportions of 36.72%, 23.69% and 33.69%. Farmers and breeders were many: 581 (76.75%). They mostly lived in urban area 490 (64.72%), were married: 92. 20% (n = 698) and 416 (59.59%) of them had more than 2 wives at the diagnosis moment. The main reason of consultation was the acute urine retention (**Table 1**) and **Picture 1**. They began the consultation from 1 to 5 years later, after the apparitions of the first symptoms. Some patients had a high level of glycaemia (n = 37), of high blood pressure (HBP) (n = 86) and 13 were HIV positive, 597 were healthy, 3 patients had only one testicle located on the left side. The data of the rectal touch were reported on **Table 2**, 79 patients (10.44%) had a rate of hemoglobin under 10 g/dl, and the urine test

**Table 1.** Motive of consultation.

Motives	n	%
<b>Urinary retention</b>	<b>390</b>	<b>51.51</b>
<b>Total dysuria</b>	<b>150</b>	<b>19.81</b>
Burning micturition	112	14.79
Pollakiuria	80	10.56
Urge micturition	60	7.92
Sensation of incomplete emptying	58	7.66
Hematuria	53	7
+ more signs	24	3.17



**Picture 1.** Acute urine retention.

**Table 2.** Repartition according to the rectal touch result.

Rectal touch result	number	%
Regular contour	741	97.89
Irregular contour	16	2.11
Hard, stony consistency	730	96.43
<b>Stony consistency</b>	<b>27</b>	<b>3.57</b>
Presence of median furrow	160	21.14
Absence of median furrow	597	78.86
Presence of nodule	24	3.17
Absence of nodule	733	96.83

was sterile for 703 patients. The PSA rate was reported on a table (**Table 2**). And the **Table 3** gave the ultrasound result. Complications found were: bladder stones (n = 48), inguinal hernia by effort (n = 36), renal failure (n = 18) and hemorrhoids (n = 12). The main emergency gesture done was bladder evacuation (n = 561). Medical treatment consisted in using Alpha blocker (Alfuzocine) for 253 (33.47%) patients, a phytotherapy for 250 (33.07%), a 5-alpha-reductase inhibitor (chibiproscar) for 27 (3.59%), association between alpha blocker and phytotherapy for 227 (29.87). Open surgery of prostate was done on 570 patients. The evolution was good for 703 (92.86%), 54 died (7.14%) and the causes were: anemia (n = 18), hyperglycemia (n = 12), HAT (n = 15), HIV complications (n = 5). For 4 other cases the causes were unknown.

#### 4. Discussion

The BPH was a frequent pathology on consultation and hospitalization in urology department in HGRN and represented 61.18% of hospitalization reasons during the period of study. Those hospitalizations were done for patients who had principal symptoms: complete urine retention, dysuria and anemia. In other African countries, the frequency varies, like in Mali it was 86.3%. The mean age of patients was 64.18 but It varies according to countries and studies; as compared in African against European ones [8] [9] [10]. We noticed that BPH is the first male urinary pathology. Furthermore, in Chad polygamists were many because polygamy was tolerated by society. So many Chadians said “we beat a woman by another woman”. It means that: if your wife behaves badly, you can get another one. The complete urine retention was the main motive of consultation and hospitalization of our study. In the population of the patients who suffered from BHP according to J.-C. Baron *et al.* [6], the incidence of the complete urine retention varies from 0.4% to 6% per year. Many others authors had found the same result [11] [12] [13]. That also means people ignore the first symptoms of BPH which were: urgency, dysuria, urinary infection, burning micturition. So a solution to handle this matter is by sensitizing people on BPH.

In our point of view, HIV, diabetes and HBP cannot only be considered as a

**Table 3.** Repartition of patients according PSA result.

PSA (ng)	Number	%
<4	516	68.13
5 to 10	69	9.16
11 to 30	69	9.16
21 to 30	51	6.77
>30	51	6.77
<b>Total</b>	<b>757</b>	<b>100</b>

Normal value: inferior to 4 ng/ml.

simple comorbidity but as aggravating factors because they increase the rate of death when people suffer from BHP according to our study. The urine test of many patients was sterile in Chad because most of them were self-medicated with antibiotics before coming to the hospital.

About 31.7% of patients had an increase of the rate of the PSA, this may be caused by an adenocarcinoma of prostate, an infection with bacteria, or the complication of bilharzia. This situation can be clarified by another future study.

For medical treatment of BHP, we frequently prescribe an alpha-blocker once or in association with phytotherapy. This is what has been done by most authors [14] [15] [16] [17]. If the result of medical treatment is not good, we only perform open surgery at this period because endoscopic column is not available. Nowadays the TURP is the gold standard of the surgery of the BHP in the world [10]. Despite this, open surgery is often used in African countries [18] because of the lack of the endoscopic column.

## 5. Conclusion

The BHP was the first cause of consultation and hospitalization in urology department in Chad. The complete urineretention was the first symptom and the most complication of BHP. People go late for BHP consultation, that situation can only be resolved by sensitizing people. The aggravating factors were: HIV, HAT and diabetes. The rate of recovery after open surgery was 92.86%.

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