



## Original Article

# Clinical Features and Treatment of Benign Prostatic Hypertrophy at the Islamic Clinic of Ngaoundere

*Aspects cliniques et thérapeutiques de l'hypertrophie bénigne de la prostate à la Clinique Islamique de Ngaoundéré*

Ngaroua<sup>1,2</sup>, Hamar-Wabi<sup>2</sup>, Dah'Ngwa D<sup>2</sup>, Eloundou NJ<sup>3</sup>

### ABSTRACT

**Introduction.** Obstructive prostatic enlargement is one of the major symptoms of the male urinary tract affection in elderly subjects and affects more than 200 million men throughout the world. When the medical treatment is not possible and surgery is proposed, endoscopic surgery is privileged. The surgery may be practiced through natural orifices, then we talk of transurethral resection. The aim of this study was to describe the socio-demographic profile of patients suffering from BPH at the Islamic clinic of Ngaoundéré. **Material and methods.** We carried out a retrospective cross-sectional study that covered a period of three (03) years going from January 2017 to October 2019. **Results.** We identified 139 cases of transurethral prostate resection amongst which 29 cases were excluded from study because of the diagnosis of adenocarcinoma of the prostate gland. With a mean age sample of 66 years, the age group of 70-80 years was the most represented with a frequency of 35.5%. In this sample, 89.09% underwent a PSA test before surgery. Echography of the prostate gland revealed mostly the weights of 25g and 50g each with a frequency of 27.20%. One death was recorded out of the 110 patients enrolled giving a death rate of 0.90%. 11 patients in this sample presented prostate relapse either 11%. **Conclusion.** At last, we may note that, transurethral prostatic resection is a surgical technic of reference to the treatment of benign prostatic hyperplasia with several advantages compared to open surgery at islamic clinic of Ngaoundéré.

### RÉSUMÉ

**Introduction.** L'hypertrophie prostatique obstructive est l'un des principaux symptômes des pathologies des voies urinaires chez les sujets âgés et affecte plus de 200 millions d'hommes dans le monde. Lorsque le traitement médical n'est pas possible et qu'une intervention chirurgicale est proposée, la chirurgie endoscopique est privilégiée. La chirurgie peut être pratiquée à travers des orifices naturels, puis on parle de résection transurétrale. Le but de cette étude était de décrire le profil sociodémographique des patients souffrant d'HBP à la clinique islamique de Ngaoundéré. **Matériels et méthodes.** Nous avons réalisé une étude rétrospective transversale couvrant une période de trois (03) ans allant de janvier 2017 à octobre 2019. Les données collectées ont été analysées par les logiciels Excel 2013 et XLSTAT version 2016. **Résultats.** Nous avons identifié 139 cas de résection transurétrale de la prostate dont 29 cas ont été exclus de l'étude en raison du diagnostic d'adénocarcinome de la glande prostatique. Avec un échantillon d'âge moyen de 66 ans, le groupe d'âge de 70 à 80 ans (35,5%) était le plus représenté. Dans notre population, 89,09% ont subi un test PSA avant la chirurgie. L'échographie de la prostate a révélé principalement des poids de 25g et 50g chacun avec une fréquence de 27,20%. Un décès a été enregistré sur les 110 patients inscrits donnant un taux de mortalité de 0,90%. Onze patients (11%) ont eu une récidive de l'adénome. **Conclusion.** La résection prostatique transurétrale est une technique chirurgicale de référence au traitement de l'hyperplasie bénigne de la prostate avec plusieurs avantages par rapport à la chirurgie ouverte à la clinique islamique de Ngaoundéré.

1. Faculty of Medicine and Biomedical Sciences of Garoua, University of Ngaoundéré
2. Department of Biomedical Sciences, University of Ngaoundéré-Cameroun
3. Faculty of Medicine and Biomedical Sciences, University of Yaoundé 1

#### Auteur correspondant :

Dr Ngaroua,

Tel: (+237) 699 978 351;

Mail: [mdngaroua2007@yahoo.fr](mailto:mdngaroua2007@yahoo.fr)

**Keywords:** prostate, transurethral resection, Islamic clinic of Ngaoundéré.

**Mots-clés :** prostate, résection transurétrale, clinique islamique de Ngaoundéré.

### INTRODUCTION

Benign prostatic hyperplasia (BPH) commonly called prostate adenoma is the most frequent benign tumor of the male sex. The prevalence of BPH increases with age and continue to increase with ageing population (6). This pathology as such becomes a public health concern and moreover a major preoccupation for health care

professionals (1). It is also known to be responsible for the micturition problems in old peoples. Life expectancy for men in Cameroon is in increase these last year's as such increased the rate of ageing pathologies related like BPH and prostatic cancer(8). The second international seminary on BPH recommended to carry out epidemiological studies on the incidence and prevalence

of BPH in every continent [Barry MJ and al,1993]. As a matter of fact, if such studies have been carried out in other continents of the world, it is not the case of black African countries and Cameroon in particular. The treatment of prostatic enlargement has known several evolutions among which we can name, open surgery [Freyer Hryntchak, Terence Millin], endoscopy (transurethral resection). Then, medical treatment by the means of medicinal plants, alpha blockers and hormones. Also, other methods of treatment such as urethral prostatic dilatation, prostatic thermotherapy, cryosurgery, electrovaporisation and laser vaporization.

Endoscopic resection of the prostatic gland remains a challenge in developing countries as Cameroon whereby open surgery remains the most practiced with a favorable recovery notwithstanding a non-neglected post-operative complication. This last decade, endoscopic development have reduced the rate of open surgery in our developing countries. The aim of this study was to describe the socio-demographic profile of patients suffering from BPH at the Islamic clinic of Ngaoundéré

## MATERIALS AND METHODS

### Type of study

The design is retrospective study on the evaluation of the endoscopic resection of BPH at the Islamic clinic of Ngaoundéré.

### Period of study

The study was carried out within a period of six (06) month, going from the month of July 2019 to December 2019.

### Study setting

The study was carried out in the unit service of urology of the clinic.

### Population of study

Study population concerned all the patients that consulted for a prostatic enlargement in the grand north regions.

### Study sample

110 patients constituted the study sample for this design study.

### Type of pattern

The sampling was exhaustive and non-probabilistic. As such, all the patients that responded to the criteria conditions were included to the study.

### Inclusion criteria

Confirmed BPH with anatomy pathologic test and an endoscopic management surgery carried out at the Islamic clinic of Ngaoundéré

### Non-inclusion criteria

Patients with confirmed BPH that underwent open surgery for the management of the prostate gland at the Islamic clinic of Ngaoundéré. Equally, were not included, patients with adenocarcinoma of the prostate gland at pathologic anatomy exams.

## Data treatment

Recovered survey files were analyzed by the software SPSS, treated and compiled by the software Excel 2013 and XLSTAT 2016 version.

## Materials

Patients' medical files, surgical reports, anesthetic files, biological and anatomic results such as: PSA test, echography, uroflometry and anatomy pathologic report of the gland.

## Method of data collection

Data were collected by the means of a survey file that included the following characteristics: sociodemographic profiles (name and surname, age, region of origin, place of residence, matrimonial statute, tribe, profession and religion), medical history (passed history of BPH, drug consumption, urinary infections), diagnostic elements (motifs of consultation, rectal examination, PSA test, anatomy pathologic test results), treatment (anesthetic, type of resection, operative report, surgical duration, post-operative follow up, hospital stay period) and the evolution (rate of mortality and relapse cases).

## RESULTS

### Socio-demographic characteristics

We studied 110 patients The most represented age group of the sample was 70 and 80 years with 35.5% followed by those of 60 and 70 years with 34.5%. Age extremes were 50 years and 104 years with an average age of 66 years. Figure 1 is the representation of age distribution.

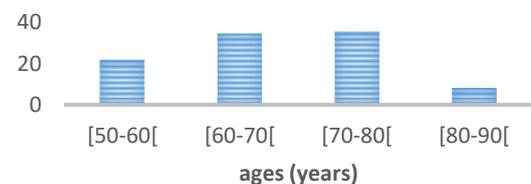


Figure 1 : Patients distribution following age

### Diagnosis of benign prostatic hyperplasia

#### Chief complaint

Figure 2 shows the chief complaints of our population of study. The main reasons of consultation were dysuria (43.63%) and distended bladder (31.81%).

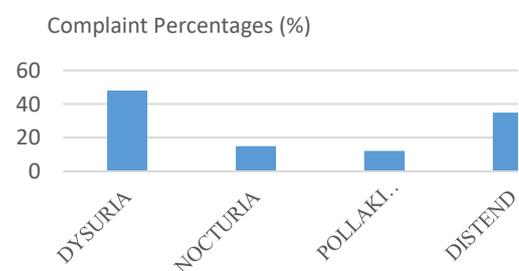
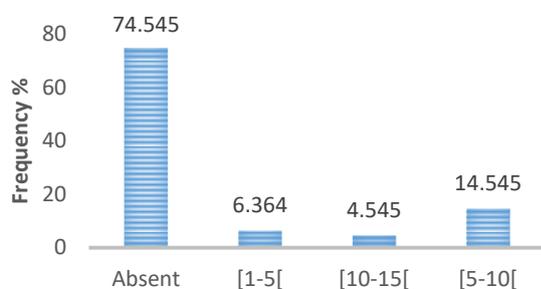


Figure 2: distribution of patients following consultation complaints

**Urine outflow measure**

The urine outflow measure (uroflometry) is the parameter that measures urine outflow during micturition so as to classify dysuria by informing on the state of urethral obstruction. The figure 3 shows that, 14.5% of our sample presented a slight obstruction whereas, 6.3% and 4.5% of the patients respectively presented moderate and severe obstructions of the urethral canal.



**Figure 3:** Patients distribution following urine outflow

**Impact on the urinary system**

Sonogram to assess the impact of enlarged prostatic gland on the urinary system was normal in 91.8%. We observed a distended bladder in 8.1%.

**Treatment**

Most patients (91.8%) underwent a transurethral resection during procedure against 8.1% for the TUR-P channel.

**Evolution**

Out of the 110 patients of the sample, 11 patients (11%) had recurrence of the disease.

**Mortality**

The mortality rate was 0.90% corresponding to one death out of 110 patients.

**Correlation between the weight of the prostate gland at echography and the result at anatomic pathology.**

The table 1 illustrates the correlation between the sonographic weight of the gland and the histological examination. A p-value <0.0001 proves a significant relation that exists between the weight of the prostate gland and the pathologic results.

**Table 1: correlation between sonographic weight and pathology results**

Variables	Modes	Pathology results					p-value
		Absent	PIN 1	PIN 2	PIN 3	Total	
Ultrasound	Absent	0	3.636	1.818	5.455	10.909	< 0,0001
	[100-125[	1.818	3.636	4.545	0	10	
	[125-150[	0	6.364	0.909	0.909	8.182	
	[25-50[	9.091	5.455	7.273	5.455	27.273	
	[50-75[	20.909	2.727	0.909	0	24.545	
	[75-100[	0	10	1.818	7.273	19.091	
	Total	31.818	31.818	17.273	19.091	100	

**DISCUSSION****Socio-demographic data**

In this study, the mean age of the sample was 66 years. The most affected age group was that of [70-80] years with a frequency of 35.45%. These results are close to those of Paul Banou in a study carried out whereby, the average sample age of the population of study was 67.06% (14).

On the other hand, Fatima in Mali worked with an average sample age of 70.90 years (15).

This average age is considered in Cameroon as the group of elderly peoples. In fact, in Cameroon, a person is considered old if he/she attains the retirement age that varies between 50 to 65 years (5).

**Reasons of consultation**

Study reveals that, the principal reason of complaint was dysuria with 43.6% cases followed by distended bladder

and pollakiuria with respective frequencies of 31.8% and 10.9%. However, Mouad El Mouhtadi reported in 2018 in Marrakech that dysuria was the major motif of complaint with a frequency of 83.3%; followed by pollakiuria with 70% (13). These rates are different from those of Mahamadou Alhader whereby pollakiuria and dysuria were present in the whole sample, either a 100% (12). Similar symptoms are observed in this sample.

**Uroflometry**

It has been realized by 28 patients of this sample before surgery showing an average of 27.5ml/s. slight obstruction was mainly observed with 14.5%. This average urine outflow is greater than that of Mouad El M reported in 2018 before and after surgery with respective percentages of 7.2ml/s and 20.5ml/s. This difference of urine outflow may be as a result of a week participation concerning the uroflometry test as just 28 patients out of

110 realized this test, whereas all the patients in Mouad sample went through, this test.

### Pathology

In this design study, anatomy pathologic results of 104 patients realized revealed that, 75 patients had a normal BPH whereas 29 of the patients result revealed an adenocarcinoma with respectively 72.11% for BPH and 27.88% for adenocarcinoma of the prostatic gland.

### Risk Factors

Among the risk factors recorded in this study, 22 patients were tobacco consumers and 31 patients' alcohol consumers either 20% or 28.2% respectively. Recorded rates of alcohol and tobacco consumptions in this study is less than that of Paul B whereby 33.33% (23) of the patients sample consumed tobacco and only 4.35% consumed alcohol (14). Obtained results may be as a result of the fact that, Paul Banou carried out his study in a region where alcohol was prohibited.

### Surgical treatment by the transurethral resection of the prostate (TURP) gland

The type of surgical resection the most used in this sample was the transurethral resection with a frequency of 91.8%. Also used, was the TURP channel in a few cases where the main indication was to take a piece of tissue so as to unblock the urethral canal.

### Evolution

Out of the 110 patients enrolled in this study, we recorded just one death either 0.90%. This rate is lower than that of Guisse who recorded 7% death in his study sample (10). Obtained death rate in this study may be as result of the professionalism of the practitioners of the Islamic clinic of Ngaoundéré.

Furthermore, we have registered 11% of relapse in the course of this study which may probably be due to incomplete resection of the adenoma during surgery.

### CONCLUSION

In spite of the reputation of the clinics team to master the endoscopic technic of the prostatic gland resection, there exist certain difficulties related to insufficient endoscopic materials and qualified human resource in the domain of endoscopy. None of the TURP syndrome was recorded in the course of this study. Despite of the low mortality rate in this study, the TURP requires a number of means to be more efficient, as such, in the perspective of health for all in our country, the TURP technic is worth to be supported and developed for its vulgarization in the whole country.

### REFERENCES

1. Agence nationale d'accréditation et d'évaluation en santé (ANAES). Recommandations pour la pratique clinique. Prise en charge diagnostique et thérapeutique de l'hypertrophie bénigne de la prostate. Mars 2003
2. Agence nationale d'Accréditation et d'Evaluation en Santé Traitement conservateur de l'hypertrophie prostatique. Thermo-thérapie de la prostate. Dossier d'évaluation de l'acte (système urogénital), Paris, ANAES. 2001.
3. ANAES. Recommandations et références médicales. Prise en charge diagnostique et thérapeutique de l'hypertrophie bénigne de la prostate. Mars 2003, 1-104

4. Eyinga E C. Situation socio-économique des personnes âgées au Cameroun. Etat des lieux et facteurs explicatifs. Bureau centrale des recensements et des études de la population, Cameroun, 2011 ;
5. F. Lacoïn, R.-O. Fourcade, M. Rouprêt, A. Slama, C. Le Fur d, E. Michel, A. Sitbone, F.-E. Cottéd Perceptions de l'hypertrophie bénigne de la prostate par le patient et le médecin généraliste - étude Trophée. *Prog Urol* (2013) 23, 50-57
6. Fané M.M. (2009). Pathologie tumorale et al cancer de la prostate au service d'urologie du chu Gabriel Toure. Université de Bamako de pharmacie et d'odontostomatologie ; 1-73.
7. Fouda et al, Symptomatology du Bas Appareil Urinaire de l'Homme à l'Hôpital Central de Yaoundé. CHU Yaoundé. 2013.
8. Guess N. A, Benign prostatic hyperplasia: antecedents and natural history. *Epidemiol. Rev*, 1992; 14, 131.
9. Guissé S. : Étude épidémiologique de l'adénome de la prostate dans le service de chirurgie générale de l'hôpital Nianankoro Fomba de Ségou. Thèse de Med. Bamako 2007 ; 99p.
10. Ho H, Yip S, Lim K, Foo K, Cheng C. A prospective randomized controlled trial comparing bipolar transurethral resection in saline (TURIS) system and conventional monopolar transurethral resection of prostate in men with benign prostate hyperplasia: a 1 year's clinical efficacy and safety. *J Urol* 2006; 175 (Suppl. 4): 461.
11. Mahamadou ALHADER. Prise en charge de l'Adénome de la prostate à l'hôpital de Gao. Thèse de doctorat. (Mali) : université de Bamako ; 2010. 44 p.
12. Mouad El Mouhtadi. Devenir des patients à long terme après résection transurétrale de la prostate. (Maroc) : université Cadi Ayyad ; 2018. 65 p.
13. Paul Banou. La résection transurétrale de la prostate (RTUP) en milieu salin dans le service d'urologie. Thèse de doctorat. (Mali) : université des sciences, des techniques et des technologies de Bamako ; 2013. 65-82p.
14. Soltani Fatima. L'hypertrophie bénigne de la prostate à propos de 359 cas. Thèse de médecine n° 053/10 ; Université SIDI MOHAMED BENABDELLAH, Faculté de médecine et de pharmacie ; FES, 2010-.