

TRANSURETHRAL MONOPOLAR RESECTION OF THE PROSTATE: experience of AMIROU BOUBACAR HOSPITAL IN NIAMEY

ABSTRACT

Introduction

Benign prostatic hypertrophy (BPH) is a very common urological pathology and occurs in men in their fifties. The clinical manifestation is manifested by symptoms of the lower urinary tract such as dysuria and pollakiuria . Surgical management has been revolutionized by the advent of trans-urethral resection of the prostate (TURP), which is a reference treatment.

Objective

The objective of this work was to evaluate the results of the first cases of transurethral resection of the prostate at Amirou Boubacar hospital in Niamey.

Patients and method

This was a descriptive study conducted at Amirou Boubacar Hospital in Niamey over the period from December 5, 2021 to June 5, 2022 and involved patients admitted to the urology department of Amirou Boubacar Hospital in Niamey. The variables studied were: age, profession, level of education, marital status, clinical and therapeutic aspect. The data was collected on an individual collection form from hospital records. To analyze the data, spss version 20 software was useful and allowed us to obtain our results.

Results

During our study period we had 28 cases of TURP out of a prevalence of 9.20% of all emergencies. The most represented age group is that of 60 – 69 years with 60.72%. Farmers represented (71.43%), civil servants (21.43%). Shopkeepers (7.14%). From a clinical point of view, all our patients consulted for dysuria and pollakiuria, an average IPSS score (International Prostate Symptom Score) of 22.33. The average total PSA (Prostate Specific Antigen) was 3 ng / ml, an average prostate volume of 45.20 g. The average duration of

intervention was 41 min. a catheterization of 48 hours, as a complication we note 3.57% a type of severe hyponatremia

Conclusion

Benign prostatic hypertrophy is a frequent pathology in urology whose surgical management has been revolutionized by TURP (Transurethral Resection of the Prostate) being the gold standard. This shortens the hospitalization period with a good improvement in the patient's quality of life and micturition.

Key words: *BPH, TURP, hypertrophy, urology, Amirou Boubacar hospital in Niamey, Niger*

INTRODUCTION

Benign prostatic hyperplasia (BPH) is a real social and public health phenomenon affecting men from the fifth decade. Despite its benign nature, it can cause complications that can go as far as complete retention of urine [1]. Surgical management of benign prostatic hyperplasia has changed considerably over the past fifteen years. Open surgery, which represented a therapeutic standard for large volumes, gradually gave way to the less morbid endoscopic technique, including TURP, which is a reference treatment for benign prostatic hyperplasia [2]. The objective of this work is to evaluate the results of the first cases of transurethral resections of the prostate (TURP) at the AMIROU BOUBACAR Hospital in NIAMEY.

2. MATERIALS AND METHODS

This is a descriptive study conducted at the AMIROU BOUBACAR Hospital in NIAMEY over the period from December 5, 2021 to June 5, 2022 and concerns patients who have benefited from TURP for benign prostatic hypertrophy. The variables studied are: age, profession, level of education, marital status, clinical, therapeutic and evolutionary aspects.

The data was collected on an individual collection form from hospital records. The data was analyzed using SPSS version 20 software.

3. RESULTS

During this study period, 28 cases of TURP were identified out of 304, ie a prevalence of 9.21% of all urological surgeries. The most represented age group (Table 1) is that of 60 – 69 years with 60.72%. Among the patients studied, farmers represented (71.43%), civil servants (21.43%), traders (7.14 %) (figure 1). Three quarters of patients (75%) are uneducated (Table 2).

From a clinical point of view, all our patients consulted for dysuria and pollakiuria (100%) (figure 2) and only 10.71% consulted for urinary burns. 39.29% of patients have a score IPSS between 20-24 with an average IPSS score of 22.33 (Table 3). The Total PSA is between 2 to 3.99 ng/ml and the average PSA is 3 ng/ml (Table 4). 89.28% have a prostate volume between 30 to 59 g with an average of 45.20 g (Table 5). The duration of intervention is 50min in 32.14% with an average of 41min (Table 6). From an evolutionary point of view, we note high rates for 48-hour hospitalization (82.35%) (Figure 3) and for 48-hour urethral catheterization (96.43%) (Figure 4), whereas these rates are respectively 5.88% and 3.57% in 72H. As a complication, 3.57% is severe hypernatremia (the fluid of irrigation is the glycocoll) (Figure 4).

Table 1: *Distribution of patients by age*

Age	N° of Patients	Percentage
50-59 years old	2	7.14%
60-69 years old	17	60.72%
70-79 years old	7	25.00%
80 – 89 years old	2	7.14%
Total	28	100%

60.72% of patients are between 60 – 69 years old

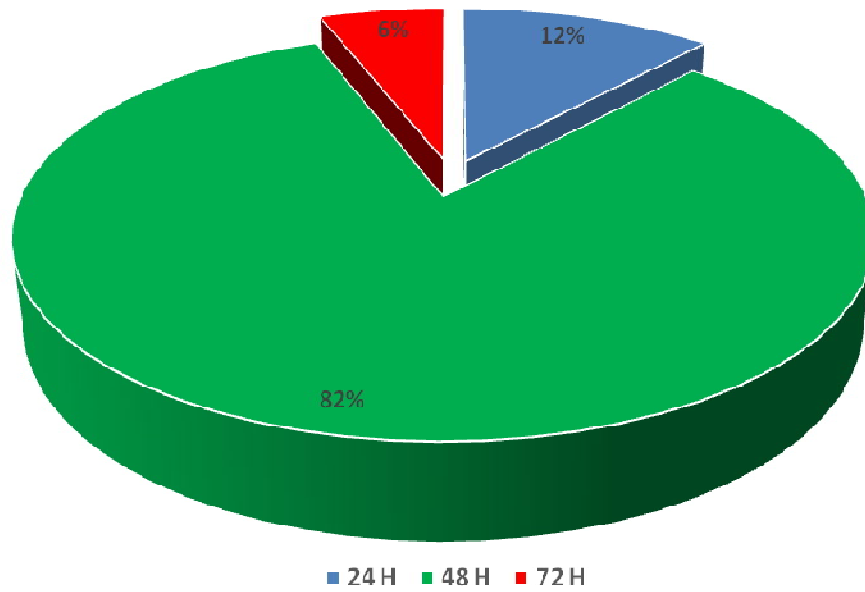


Figure 1: Patient repair by occupation

71.43% of patients are farmers

Table 2: Reparation of patients according to level of education

Educational level	N° of Patients	Percentage
Not Educated	21	75.00%
Primary	1	3.58%
Secondary	3	10.71%
Superior	3	10.71%
Total	28	100%

Three quarters of patients (75%) are uneducated

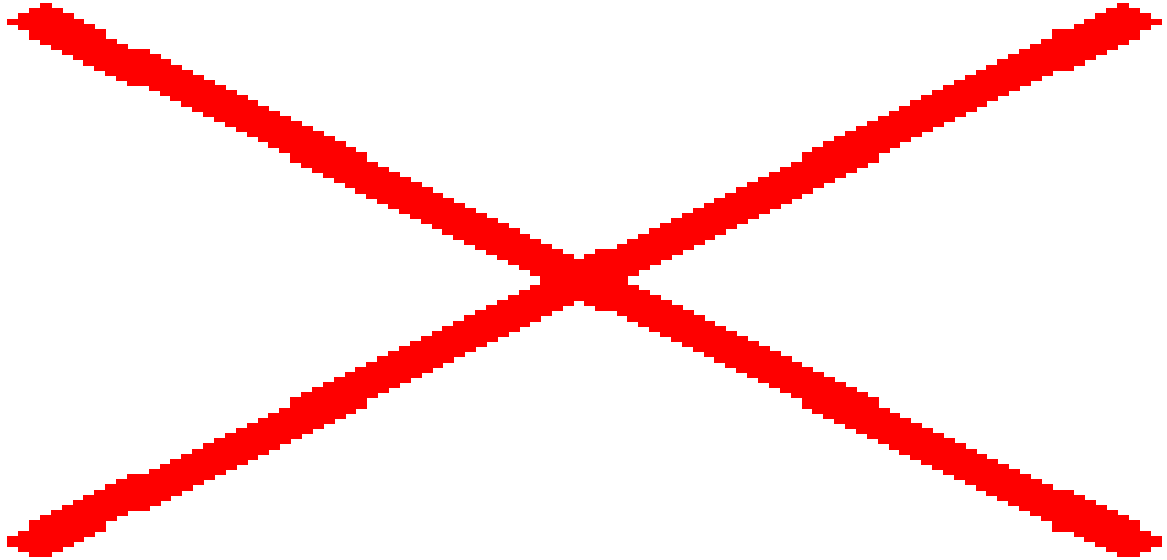


Figure 2 : repair of patients according to the reason for consultation

100.00% of patients consulted for dysuria and pollakiuria

Table 3: Repair of patients according to the IPSS Score

IPSS score	N° of Patients	Percentage
10-14	1	3.57%
15-19	7	25.00%
20-24	11	39.29%
25-29	8	28.57%
30-35	1	3.57%
Total	28	100%

39.29% of patients have an IPSS score between 20-24

Table 4: Repair of patients according to the result of PSATotaL

Total PSA in ng/ml	N° of Patients	Percentage
0-1.99	8	28.57
2-3.99	12	42.86
4-5.99	6	21.43
6 and over	2	7.14
Total	28	100%

71.43% of our patients have a PSA Total lower than 4ng/ml

Table 5: Repair of patients according to the result of the Rvp Ultrasound

Rvp ultrasound in g	N° of Patients	Percentage
30-39	9	32.14
40-49	7	25.00
50-59	9	32.14
60 and over	3	10.72
Total	28	100%

89.28% of patients have a prostate volume of less than 60 g

Table 6: Repair of patients according to the duration of the intervention

Duration in min	N° of Patients	Percentage
20-29	4	14.29
30-39	7	25.00
40-49	8	28.57
50 and over	9	32.14
Total	28	100%

The duration of intervention is less than 50 minutes in 67.86%

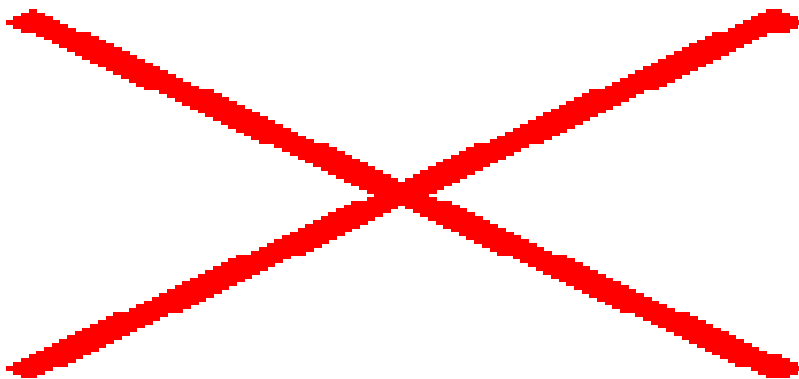


Figure 3: compensation for patients according to length of hospitalization

The duration of hospitalization is 48 hours in 82.35%

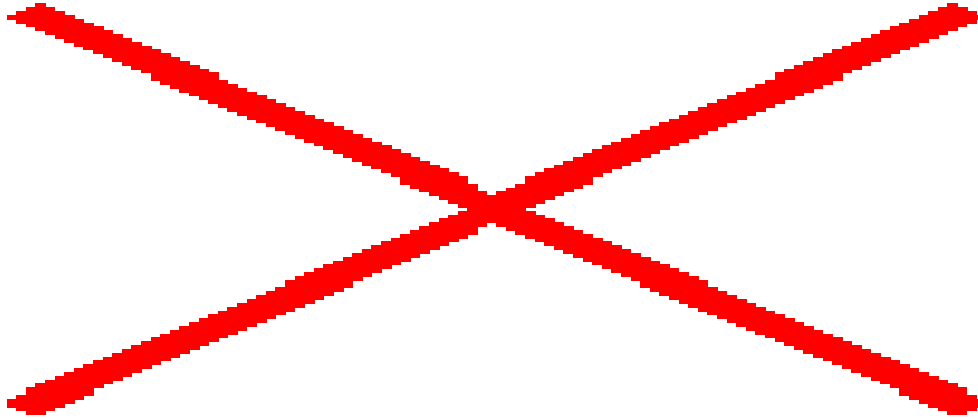


Figure 4: Repair of patients according to the duration of urethral catheterization

The duration of urethral catheterization is 48 hours in 96.43%

4. DISCUSSION

Benign prostatic hypertrophy is a frequent pathology in men over 50 and transurethral resection of the prostate is the gold standard as the reference surgical treatment.

In the series studied, the age group most represented is that of 60 – 69 years with 60.72% and an average age of 66 years. Same trend reported by Abdoulaye N diath et al in Senegal [8] with 46 % and an average age of 67 years. This is corroborated by data from the literature which finds more than 50% of men are affected by HPB from the age of 60.

The study showed that 71.43% of the patients studied are growers, clinically 46.43% came with retention and all our patients presented with dysuria and pollakiuria. M. Paul in Mali [11] to find 33.33% of farmers and as the main sign pollakiuria at 33.33%. This could be explained by the fact that our studies were carried out in urological reference centers so patients can come from health centers all over the country.

Clinically 46.43% came for urinary retention and all our patients presented dysuria and pollakiuria and the average IPSS score is 22 same trends reported by Ouédraogo. A in Burkina and Léon .M in Congo with an IPSS score of 24 and 22 respectively and also in the

same logic Kane et al in Senegal [6] and Zango and in Burkina [5] had retention of 54% and 67 respectively, 9% and also Sissoko, F.in Mali 30% urinary retention[15]

This can be explained by the financial limitation, the majority of the farming population does not consult early at the onset of the symptomatology of the lower urinary tract.

On the paraclinical level in our study the average total PSA is 3 ng / ml and the average prostate volume is 45.20 g same trends found by Ouédraogo [3] in Burkina an average total PSA at 3.15 ng / ml and volume average prostate at 56g and Timothy in Nigeria with average prostate volume of 54g. Ndiaye, M. A in Sénégal found total PSA 12, 8 ng / ml and the average prostate volume is 70 g[14].

From a therapeutic and evolutionary point of view in our series the duration of intervention is 41 minutes with an average duration of hospitalization and catheterization of 48 hours, the complication is the TURP Syndrome in 3.57%. Abdoulaye Ndiath in Senegal [8] and Zango [5] in Burkina found respectively a longer duration of intervention with an average of 63 minutes and 68 minutes then a hospitalization and catheterization time of 72 hours and 144 hours (6 days) , t andis that Diakité [9] in Mali found a shorter intervention time and no cases of TURP syndrome. Mahamat, M. A in the University Hospital of National Reference of N'Djamena (TCHAD) found a longer duration of intervention with 54 minutes an hospitalization 96 hours and catheterization time of 72 hours[16]

This difference in result can be explained by the experience of the operator, the more experienced he is, the shorter the operating time and also the use of the bipolar resector reduces the resection time with good hemostasis and no TURP syndrome.

CONCLUSION

Benign prostatic hypertrophy is a frequent pathology in urology whose surgical management has been revolutionized by TURP, which is the gold standard. This shortens the hospitalization period with a good improvement in the patient's quality of life and micturition.

Declarations

Author contributions

All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by BORI Moussa, Dambaki. Mamane Salissou ,

SOUMANA.Amadou and Kaka.Mamane Salissou. The first draft of the manuscript was written by BORI Moussa and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Competing interest

The authors have no relevant financial or non-financial interests to disclose. The authors have no competing interests to declare that are relevant to the content of this article.

All authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript. The authors have no financial or proprietary interests in any material discussed in this article.

REFERENCES

1. Jacobsen SJ, Girman CJ, Lieber MM. Natural history of benign prostatic hyperplasia. *Urology* 2001; 58:5-16.
2. Wein AJ, Kavoussi LR, Novick AC, Partin AW, Peters CA. *Campbell-Walsh Urology*. Volume 4. Tenth Edition. Saunders Elsevier 2012;91:2578-2583.
3. B Ouédraogo, H Karama, M T Traoré. Transurethral resection of the prostate at the University Hospital of Tengandogo. *jaccr . Africa* 2022;6(1):43-47
4. Guirassy S. endoscopic resection of the lower urinary tract at the CHU Ignace Deen : about 550 cases. *AFJU*.2006; 12(2):96-100
5. Leon M. Mubanga . TURP: first experience in Bukavu, DR Congo, urology department of the Catholic University of Bukavu. *Ann.Afr.Med*.vol.11, n°3, June 2018
6. Zango B, Kambou T, Sanou A. Transurethral resection of the prostate at Sanou Hospital Souro from Bobo Dioulasso about 68 cases. *AFJU*.2002 ;8 (1):1-5

7. Kane R, Ndiaye A, E Koue , Traoré AC, Bonkougou B, Ouattara Surgical treatment of BPH at CHU Sanou Souro de Bobo Dioulasso. Short-term result about 190 cases. Black Med.Afr 2006; 53(11):605-612

8. MarsZaleK M , ponholZa A , pusman M ,Berger I , Madersbacher S .transurethral resection of the prostate.Eur.urol.suppl.2009;8:504-512

9. Abdoulaye Ndiath et al. Morbi -mortality of transurethral resection of the bipolar prostate in the urology department – Andrology of the Aristide Le Dantec hospital in Dakar.PAMJ clinical Medicine.2021;5(75).10.11604/pamj-cm.2021.575.27226

- 10 .Diakité M. Diallo MS, Kambou D, Banou P, Diakité A S, Sangaré D, Sissiko I,Tembely A.Bipolar endoscopic resection. Experience of the urology department of the CHU point G.uro -Andrologie 201611. Paulhac P, Desgrand champs, F.Terllac P, Le Duc A. Endoscopic treatment of benign prostatic hyperplasia. Encycl Med chir.1998; 13: 41-273.Paris.1st Ed Elsevier

12. Mr. Paul Banou.La resection transurethral analysis of the prostate in saline medium in the urology department . Thesis Med Mali 2012

13. Timothy WZoma , Mbaeri , Joseph AmawZo.Assessment of complication of transurethral resection of the prostate using clavién . Dindo classification in South Eastern Nigeria : orakwe JC.Niger J Surg.2020 PMID: 33223813

14. Ndiaye, M. A. (2022). Résection Transurétrale de la Prostate (RTUP) bipolaire: résultats fonctionnels à propos de 39 cas au niveau des deux hôpitaux régionaux de Ziguinchor.

15. Sissoko, F., Traoré, S., Dembélé, O., Dembélé, A., Badiaga, C., Koné, S., Diakité, M. L. (2023). Transurethral resection of the prostate: first year experience of the urology department of the Sikasso Hospital. *HEALTH SCIENCES AND DISEASE*, 24(5).

16. Mahamat, M. A., Nedjim, S., Valentin, V., Allassiingar, M., Mahamat, B., & Rimtebaye, T. N. K. (2022). Transurethral Resection of the Prostate (TURP)—An Experience of the Urology Department of the University Hospital of National Reference of N’Djamena (TCHAD). *Open Journal of Urology*, 12(5), 286-293.