

Transurethral Resection of the Prostate (TURP) —An Experience of the Urology Department of the University Hospital of National Reference of N'Djamena (TCHAD)

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How to cite this paper: Mahamat, M.A., Nedjim, S., Valentin, V., Allasiangar, M., Mahamat, B. and 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, 286-293. <https://doi.org/10.4236/oju.2022.125029>

Received: April 19, 2022

Accepted: May 27, 2022

Published: May 30, 2022

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Abstract

Introduction: Transurethral Resection of the Prostate (TURP) is a multi-invasive technique in the management of Benign Prostatic Hyperplasia. It constitutes a reference in developed countries; however in sub-Saharan Africa, it is prostatic adenomectomy which is mostly used. The aim was to analyze the results of the TURP carried out at the General National Reference University Hospital in N'Djamena (Chad). **Patients and Methods:** This is a retro-prospective study which extended over a period of 2 years, from June 2014 to May 2016. The records of all patients who had undergone TURP during this period were listed and analyzed. We did frequencies and average calculations. **Results:** 59 patients' results that were treated with TURP were collected. TURP represented 33.4% of all interventions performed for prostate pathologies. The average age of our patients was 66 ± 8.06 years (50 to 92). Urinary retention was the main reason for consultation (45.7%; $n = 27$) followed by dysuria (27.1%; $n = 16$). TURP was associated with another procedure in 28.8% ($n = 17$). The average duration of hospitalization of our patients was 4.15 days with extremes of 2 to 9 days. Perioperative complications represented 13.6% of cases, early complications represented 15.3% of cases and late complications represented 6.8% of cases. The postoperative voiding status with an average follow-up of 6 months was judged to be good in 72.8% of cases ($n = 43$). **Conclusion:** TURP occupies an important place in the management of prostate pathologies with precise indications. It offers many advantages. It must be popularized in our countries; this will make it possible to limit morbidity and mortality rates and slow down medical evacuations abroad.

Keywords

RTUP, HBP, Complications, N'Djamena/Chad

1. Introduction

Transurethral resection of prostate (TURP) is a very old practice because already in the 16th century Ambroise Paré performed blind endocavitary resections, while the first true endoscopic resections date from the 1930s [1]. Now it has become the reference treatment for benign prostatic hyperplasia, for several decades in Europe and in the United States [2] [3] [4]. In Canada out of 8528 adenomectomies, TURP was performed in 92.6% of cases [5]. In Burkina Faso, out of 998 adenomectomies in seven years, 81 TURPs were performed [6]. In Chad, no study has been carried out in the past. This is due either to the difficulties of acquiring resection columns for certain health structures, or to the limited number of urologists or even to the often high cost of this mode of treatment for certain segments of the population. This practice is recent in our country. This work describes our experience by analyzing the epidemiological aspects, the result, the complications and the constraints of the practice of TURP at the National Reference Hospital of Ndjamen.

2. Materials and Method

This is a retrospective study carried out over a period of two years from July 2014 to June 2016 at the Urology Department of the CHU of National Reference. During this period, 59 files were collected. Included in the study were all patients in whom a transurethral resection of the prostate for BPH was performed, and whose operative report and postoperative follow-up, with a follow-up of at least 6 months, appeared in the case.

Variables studied:

Sociodemographic variables:

- Age, profession, terrain

Clinical variables:

Reasons for consultation, duration of symptoms, • Rectal Examination data

Paraclinical variables:

• Total PSA level; Ultrasound data of the urinary tree (prostatic volume, RPM, state of the bladder, kidneys);

Therapeutic variables:

• The indication of the TURP; the type of anesthesia used; The associated gestures; duration of intervention;

Evolutionary variables

• Per and postoperative complications. Intraoperative complications (all complications occurring during the operation). Early post-operative complications (all complications occurring within the first 30 days). Late post-operative com-

plications: those that were noted beyond the first 30 days of the operation.

- The duration of postoperative bladder drainage;
Length of hospital stay.

Results

Functional result: postoperative voiding quality:

The results were clinically evaluated. We took into account two parameters: the study of urination and urinary continence. Thus, the results were judged:

Good:

When the patient shows normal urination with bladder continence during the voiding test: absence of dysuria, good voiding stream and absence of urine leakage after urination.

Means:

When he presents with dysuria or UAR on removal of the probe requiring reinsertion of a probe for 1 to 2 days with restoration of normal urination thereafter. When he also has urine leaks between urinations which disappear before 3 months of postoperative follow-up.

Bad:

Due to the persistence of dysuria or episodes of AUR or urinary incontinence beyond the 3rd postoperative month.

The sources of the data were the files, the registers of hospitalization and operating room. A data collection sheet was developed, the data was compiled in Excel and analyzed with SPSS 18. The quantitative variables were expressed as means and the qualitative variables as percentages. A statistical correlation was sought between the variables using the Chi2 test. It was considered significant if $p \leq 0.05$.

3. Results

During the study period, 59 files meeting our inclusion criteria were collected. TURP accounted for 31.3% and 33.4% respectively of the department's endoscopic activities and interventions for prostate pathologies.

The mean age of patients was 66 ± 8.06 years with extremes ranging from 50 to 92 years. The age group between 60 - 69 years was the most represented (45.7 %) according to **Figure 1**.

Urine retention was the main reason for consultation (45.7%; $n = 27$) followed by dysuria (27.1%; $n = 16$). Digital rectal examination was performed in all our patients, it was suspicious in 6.8% of cases ($n = 4$). The prostate specific antigen (PSA) was less than or equal to the norm in 76.3% of cases ($n = 45$) with an average prostate volume of 50.20 ml on ultrasound. In half of our patients, a fighting bladder was found (55.9%).

Seventeen of our patients (28.8%) had at least two episodes of urinary retention, which raised the indication for surgical treatment of TURP (**Table 1**). All our patients were operated under spinal anesthesia, of which 6 cases, or 10.2%, were converted to general anesthesia. TURP was associated with another proce-

cedure in 17 cases, *i.e.*, 28.8%. Cystolithotomy, hernia repair and endoscopic urethrotomy (UIE) were the procedures associated with TURP, respectively in 10.2%; 8.4% and 6.8%.

The average duration of the intervention was 54.80 minutes with extremes of 30 and 90 minutes. The average catheter wearing time was 3.5 days with extremes of 2 to 10 days. The average length of hospitalization of our patients was 4.15 days with extremes of 2 to 9 days.

Peroperative complications accounted for 13.6% of cases, dominated by hemorrhage in 8.5% and subtrigonal detachment in 5.1%. Early complications represented 15.3% of cases, dominated by acute urinary retention (6.8%); urinary and genital infection (5.2%). Late complications represented 6.8% of cases, dominated by dysuria 5.1% and urinary incontinence 1.7%. The feeling of the patients on their postoperative voiding state with an average follow-up of 6 months was judged to be good in 43 cases, *i.e.*, 72.8% (**Table 2**).

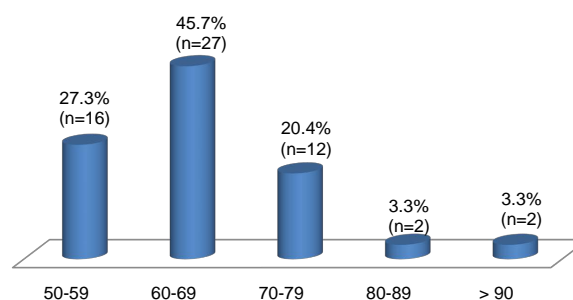


Figure 1. Distribution of patients according to age groups.

Table 1. Distribution of patients according to indications.

Indication	NOT	%
Failure of medical treatment	9	15.3
Iterative RAU	17	28.8
RCU	10	16.9
Hematuria	9	15.3
Bilateral ureterohydronephrosis with ARF	8	13.6
Bladder stones	6	10.1
Total	59	100

Table 2. Distribution of patients according to postoperative voiding status.

Voiding state	not	%
Good	43	72.8
Fair	10	16.9
Bad	6	10.2
Total	59	100

4. Discussion

During our study period, 177 surgeries were performed for prostate pathologies, including 59 by TURP. TURP accounted for 33.3% returns after prostatic adenectomy which was 57.6%. This frequency is close to that of Kane *et al.* [7] in Senegal who found 29%. Nouri [8] in Morocco and Loussaief [9] in Tunisia reported a frequency of 52.18% and 58.12% respectively. Our result is lower than that observed by other authors from clearly equipped countries. This low rate in our series could be explained by the fact that TURP is a technique recently introduced into our therapeutic arsenal and therefore less practiced.

The average age was 66 ± 8.06 years with extremes ranging from 50 years to 92 years. The age group most concerned is that between 60 - 69 years with a percentage of 47%. Other series report similar results [10]. The occurrence of the pathology increases with the aging of the population and the increase in life expectancy.

Urinary retention is the main reason for consultation (45.7%; $n = 27$) followed by dysuria (27.1%; $n = 16$). It was acute retention of urine in 17 cases and chronic retention in 10 cases. Our results can be superimposed on those of Kane *et al.* [7] in Senegal who found a frequency of 29 cases of urine retention, including 17 cases of acute retention and 12 cases of chronic retention. In the North African series, at Nouri [8] in Tunisia, retention of urine is the most frequent cause with respectively 31.1% and 40% of cases. The risk of recurrence is high and estimated at 60% within a year [11]. Acute iterative urinary retention is often an indication for surgery [12]. The high rate of urinary retention in our study and in other series demonstrates that the majority of patients consult themselves at the stage of complications.

The symptomatology evolved for more than 6 months in 76.3% of our patients. This could be explained by the lack of information of the population, the lack of financial means, the first-line use of traditional treatments.

All the patients in our series had benefited from a PSA assay. The average rate was 3.5 ng/ml. This rate is similar to that of Ghazzi [13] in Tunisia which was 3.3 ng/ml.

The average volume of the prostate was 50.2 ml with extremes of 28 to 60 ml. Diakité *et al.* [14] in Mali in 2016, Kane *et al.* [7] in Senegal in 2013 and Ghazzi *et al.* [13] in Tunisia in 2013 respectively reported a volume of 50 ml, 51.6 ml and 49.5 ml.

In our series, acute iterative urinary retention was the main indication for surgical treatment (28.8%; $n = 17$). This result is similar to that of the literature [12].

TURP was associated with another procedure in 17 of our patients, *i.e.* 28.8% of cases. This rate can be superimposed on that of Kane *et al.* [7] and Ham *et al.* [15] who respectively report 26.3% and 33.68% of cases.

Endoscopic urethrotomy was associated with TURP in 6.8% of cases. This result is significantly higher than that of Kane *et al.* [7] who find a frequency of

4.3% and 2.3% respectively. This difference could be explained by the frequency of urogenital infections in our untreated or poorly treated regions which are a source of urethral stricture.

Intraoperative complications were 13.6%. This rate is similar to that of Kane *et al.* [7] who found 15.4%. However, our results are relatively high compared to the series of Fourcade [4] which reports 3.11%. These intraoperative complications are dominated by haemorrhages in 8.5% (n = 5), who had received a post-operative blood transfusion.

We noted cervico-prostatic detachment in 5.1% of cases. This result is higher than that of Abdallah M *et al.* [9] who noted 2 cases, ie 0.16%, whose management was to extend the survey to 10 days.

Early complications accounted for 15.3% of cases in our series, dominated by acute urinary retention (6.8%); The frequency of acute urinary retention on removal of the catheter after TURP in our series is higher than that of Fourcade [4] who reported 4.8% of cases in his series.

Three of our patients (3.5%) had presented epididymo-orchitis, this result is comparable to that found by Abdallah *et al.* [10] who noted 3.6% of cases.

The frequency of occurrence of this complication in our study falls within the range of the literature where it varies between 2% and 25% according to Normand [16]. In our series, late complications were reported in 4 patients (6.77%). Three patients (5.08%) had dysuria for a follow-up of 6 months. However, these patients were subsequently lost to follow-up before an etiology was identified. Abdallah M. [10] found 5% dysuria in his series. In our series, the average duration of catheter wearing was 3.5 days with extremes of 2 to 8 days. This duration is comparable to that of Kane [7] in his series finding an average of 4 days. However Ghazzi [13] reports an average duration of 1.5 days. The long duration of our series compared to that of the literature could be explained by the occurrence of early per and postoperative complications in our series which required an extension of catheterization and hospital stay for better management. The average length of hospital stay in our series is 4.15 days. This duration is similar to that of Ghazzi [13] in his series found an average duration of 1.17 days. We can say that TURP allows a reduction in the average length of stay and therefore hospital discharge. In our series, the postoperative voiding state was judged on the feeling of voiding quality judged to be good in 72.8%. Result superimposable on that of Fourcade [4] which finds a good result in 75% of cases. On the other hand, Diakité *et al.* [14] in Mali report a rate of 80.1% which is clearly higher than our results. An objective assessment could be obtained by a flow meter—not feasible in our environment.

5. Conclusion

The RTUP occupies an important place and exhibits good results. But its practice is confronted with many obstacles, still leaving adenectomy a major place. It offers more advantages in terms of morbidity, mortality, and hospital stay, thus allowing better surgical management of BPH.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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