

## Epidemiological-Clinical and Paraclinical Profile of Prostate Tumors in the Urology Department of the Center Hospitalier Universitaire Gabriel Toure about 1350 Adenomectomy Specimens

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### Abstract

### Original Research Report

**Objective:** The aim of this study was to evaluate the epidemiological, para-clinical and histological profile of prostate tumours at the Gabriel Touré University Hospital in Bamako. **Patients and Methods:** This was a cross-sectional and descriptive retrospective study conducted over 12 years, from 1 November 2005 to 1 November 2017. It covered all patients received and operated on in the Urology Department of the Gabriel Touré University Hospital for prostate tumours and having a complete medical file. **Results:** Out of a total of 4,250 patients operated on in the urology department, 1,350 cases of prostate tumours were listed, i.e. a frequency of 31.7%. Prostatic adenomyoma was found in 90.9% of patients and prostatic adenocarcinoma in 6.7%. The average age of the patients was 70.5 years with extremes of 51 and 100 years. Pollakiuria was the most frequent reason for consultation (33.8%). TR, renal-vesicoprostatic ultrasound and PSA were essential for the diagnosis. The most frequent germ was *Escherichia coli* (25.5%), hyper creatinemia was found in 22.3% of patients. PSA was elevated in 33.4% of benign prostate tumours and 2% of prostatic adenocarcinomas were histologically discovered (normal PSA). Transvesical adenomectomy of the prostate (TVAP) was performed in 82.3% of patients and cervicoprostatic evacuation in 17.7%. The postoperative course was simple in 90.2% of patients, an infection of the surgical site (6.8%), bleeding complications (0.6%), we recorded 2% of deaths in the department and 0.4% of transfers to the intensive care unit. **Conclusion:** Prostate tumours are frequent in Bamako. Prostate tumours are frequent in Bamako, transvesical adenomectomy of the prostate and cervicoprostatic evacuation are the therapeutic means used. Prostatic adenomyoma is the most frequent histological type (90.9%) followed by prostatic adenocarcinoma (6.7%).

**Keywords:** Prostate tumours, Profile, epidemiological, clinical, para-clinical.

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## INTRODUCTION

Prostatic tumors are fairly common parenchymal pathologies in men from the age of 50. They constitute a real public health problem in the world [1, 3] and occupy an important place in our daily practice. They can progress to obstructive renal failure [2].

Digital rectal examination and Prostate Specific Antigen (PSA) assay are essential for the diagnosis of these tumours. Two entities are known:

- Benign tumors of the prostate which have long been considered the most frequent.

- Malignant tumors (prostatic cancers): the second most common cancer in men and the sixth cause of death by male cancer in the world. Their incidence, especially that of cancer, seems to be gradually changing thanks to the increase in life expectancy and the improvement of screening techniques [3].

## PATIENTS AND METHODS

This was a cross-sectional and descriptive retro-prospective study carried out over 12 years, from November 1, 2005 to November 1, 2017. It covered all patients received and operated on in the Urology department of the CHU Gabriel Touré for prostate

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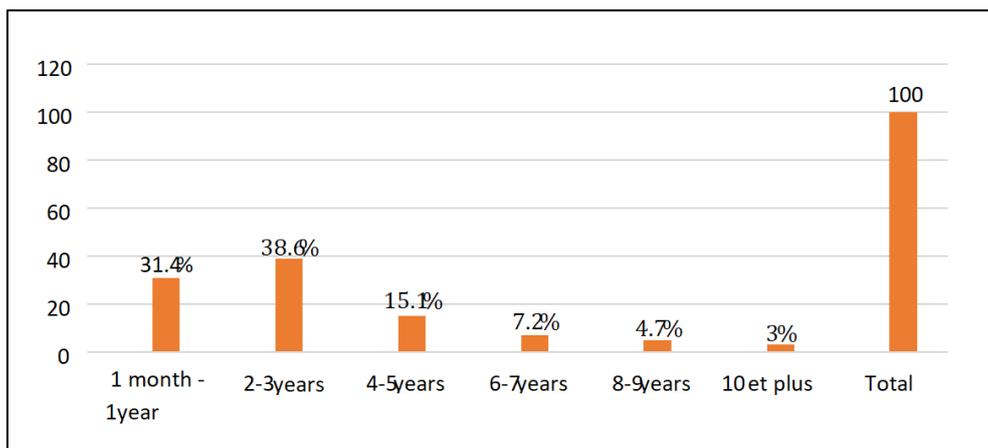
tumor and having a complete medical file. The diagnosis of prostate tumor was made by digital rectal examination. Reno-vesicoprostatic ultrasound was done, the assay of prostate specific antigen (PSA) for financial reasons was not performed in 288 patients. After removal, the piece was sent to the anatomopathology department for histological examination. The parameters studied were age, clinical, paraclinical and therapeutic aspects. The creatinine level considered normal was lower than 120  $\mu\text{mol/l}$ , normal total PSA level is lower than 4 ng/ml. Data were analyzed using SPSS Statistics 12.0 software.

## RESULTS

We collected 1350 cases of prostate tumors out of a total of 4250 patients operated in the urology department, i.e. a frequency of 31.7%.

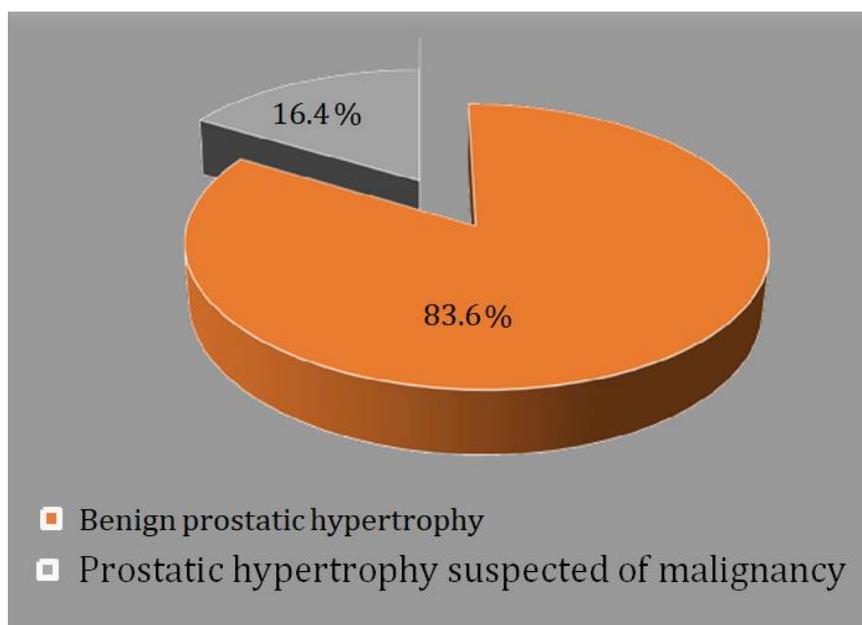
The average age of our patients was 70.5 years with extremes of 51 and 100 years.

The most represented age group was between 61 and 70 (39%). Urinary schistosomiasis was the main urological history found in 38% of patients. Pollakiuria was the main reason for consultation with 33.8% of cases followed by acute bladder urinary retention (23.9%), these disorders voiding had been evolving for an average of 3.4 years (Fig. I).



**Fig. I: Distribution of patients according to the duration of micturition disorders**

On digital rectal examination, benign-looking prostatic hypertrophy was found in 83.6% of patients (Fig. 2).



**Fig. 2: rectal examination result**

Temporary urine diversion was performed in 44.4% of patients. An infectious complication was

found in 44.9% of the patients preoperatively (table I) with *Escherichia Coli* in 25.5% of these cases.

**Table I: Distribution of patients according to the type of preoperative complication in the urology department**

Complication types	N	%
Mecanic	174	12.9
infectious	607	44.9
Hemorrhagic	63	4.7
Lithiasis	50	3.7
no complication	456	33.8
<b>Total</b>	<b>1350</b>	<b>100</b>

Only 22.3% of patients had a high serum creatinine level, they had a high total PSA in 17.7%, normal (61%) undosed (21.3%).

Trans-bladder adenomectomy of the prostate (ATVP) was performed in 82.3% of patients, cervico-prostatic dissection in 17.7% of them. The average weight of the operative part was 81.2g with extremes of 18 and 300g.

The most represented histological type was prostate adenomyoma (90.9%), prostatic adenocarcinoma was found in 6.7% of patients. The postoperative course was simple in 90.2% of patients, an infection of the operating site (6.8%), hemorrhagic complications (0.6%), we recorded 2% of deaths in the service and 0.4% of transfers to intensive care.

PSA was elevated in 33.4% of benign prostate tumors and 2% of prostatic adenocarcinomas were histologically discovered (Table II).

**Table II: Distribution of patients according to histological type and PSA level**

Histological types	Total PSA level						TOTAL	
	Normal		Hight		No dosed			
	N	%	N	%	N	%	N	%
Adenomyoma of the prostate	793	58.7	210	15.5	224	16.6	1227	90.9
Adenofibroma of the prostate	1	0.07	3	0.2	8	0.9	12	0,9
Adenocarcinoma of the prostate	28	2	25	1.8	37	2.7	90	6,7
Adénoma of the prostate	1	0.07	1	0.07	19	1.4	21	1,5
<b>Total</b>	<b>823</b>	<b>60.9</b>	<b>239</b>	<b>17.7</b>	<b>288</b>	<b>21.5</b>	<b>1350</b>	<b>100</b>

## DISCUSSION

### Frequency

Surgery for prostate tumors accounted for 31.7% of the department's surgical activity. This frequency is comparable to that of Diakité. ML *et al.*, (30.58%) [4] but significantly lower than those of Kassogué *et al.*, (63%) [2] and Natchagande. G *et al.*, (60.8%) [5]. The fairly varied frequency of prostate tumors would be linked to the diversity of methodologies.

### Age

Patients had an average age of 70.5 years with extremes of 51 and 100 years. Similar average ages were found by other authors in Africa: Hunnasso. P.P *et al.*, in Benin (70 years  $\pm$  9 years) [6], Barry. M *et al.*, in Guinea (70, 27 years old) [1], KHOUAJA. K *et al.*, in Tunisia (63.77 years) [7]. There is no significant difference in the average age reported in the West: 71.4  $\pm$  9.2 years in France [8]. All these data clearly show that prostate tumor remains a disease of the elderly subject.

### Reason for Consultation

In several studies, obstructive signs were the main reason for consultation: dysuria in 56% of cases according to Diakité ML *et al.*, [4], acute retention of bladder urine in 87% of cases according to BARRY. M

[1]. The majority of our patients had consulted for pollakiuria (33.8%). In the study of Massandé Mouyendi. J *et al.*, it represented 56% of the reasons for consultation [9]. This pollakiuria evolved on average for 3.4 years with a significant proportion of cases (31.4%) occurring between 1 month and 1 year.

Digital rectal examination is an essential element in the diagnosis of prostate tumour. He makes the diagnosis, his contribution to the suspicion between benignity and malignancy is known. In our study, it was in favor of benign hypertrophy in 83.6% of cases and of cancer in 16.4% of cases. This proportion is close to that of Diakité. ML *et al.*, [4], but lower than that of Barry. M *et al.*, [1] in Conakry (93% BPH).

The preoperative assessment had found a urinary tract infection in 44.9% of patients, Escherichia Coli (25.5% of these cases of infection) was the most common germ. The proportion of urinary tract infection in our study was different from that found in other studies. Diakité. ML *et al.*, [4] at (25.5%), Hounnasso.

P.P *et al.*, [6] in Benin (70%), Barry *et al.*, [1] in Guinea (88%).

The relatively high proportion of urinary tract infection in our study could be explained by the high

percentage of catheterization or suprapubic catheter port preoperatively (44.4% of patients).

Only 22.3% of patients had an elevated serum creatinine level. Diakite. ML [4] and Barry. M [1] had found higher proportions of hypercreatinine, i.e. 28.41% and 31.4% respectively.

Prostate biopsy is an important step in the diagnosis of prostate cancer, currently it is part of the 2nd line diagnostic tools and must be performed even if the diagnosis of cancer seems obvious on clinical examination associated with a rate high PSA [4].

It was not done in our study due to lack of equipment in the service.

### The Histological Type

The anatomopathological examination of the surgical specimen found 90.9% adenomyoma, 6.7% prostatic adenocarcinoma. 33.4% of benign tumors had an elevated PSA and 2% of adenocarcinomas had a normal PSA. Larger proportions of prostatic adenocarcinoma have been found in other studies: Barry. M *et al.*, (26.3%) [1] Diakité ML *et al.*, (32.40%) [4]. In all these studies the proportion of elevated PSA is greater than that of histological cancers. This poses the problem of PSA reliability, especially when the prostate tumor is large.

### Treatment

Surgery is the reference treatment for BPH, the open route has greatly diminished and now represents only 18% of operations in France [10, 11]. If non-invasive treatments such as transurethral resection of the prostate (TURP), laser vaporization and the technique

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