

Radical Prostatectomy: Indication, Technique and Results at Sylvanus Olympio University Hospital Center of Lomé

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How to cite this paper: Agbedey, M.S., Makala, K.G., Sikpa, K.H., Sewa, E.V., Botcho, G., Tshimbundu, N.D., Kangudia, K.S., Katanga, K.C., Diallo, M.S., Diallo, I., Ndengang, T.P., Padja, E., Leloua, E. and Tengue, K.K. (2023) Radical Prostatectomy: Indication, Technique and Results at Sylvanus Olympio University Hospital Center of Lomé. *Open Journal of Urology*, 13, 565-571.

<https://doi.org/10.4236/oju.2023.1312062>

Received: September 21, 2023

Accepted: December 26, 2023

Published: December 29, 2023

Abstract

Aim: Radical prostatectomy started in TOGO for nearly a decade. We purposed to evaluate the indications, technique and result obtained by this practical in our context. **Methods:** Descriptive retrospective study over 6 years, involves patients who underwent radical prostatectomy in the urology andrology department of the Sylvanus Olympio University Hospital in Lomé. **Results:** In 6 years, 24 radical prostatectomies were performed on 209 patients with prostate cancer (prevalence 12.92%). The average age of the patients was 63.8 ± 4.2 years. The average PSA rate was 27.9 ± 21.2 ng/ml. 58.3% were at high risk for d'Amico. The retropubic route with ilio-obturator lymph node dissection was the technique used for all patients. 80.9% of patients were continent and 33.3% had a satisfactory erection 12 months after the surgery.



Recurrence-free survival at 1 year was 62.5% and 3 deaths or 12.5% were recorded in the first year in high-risk patients. **Conclusion:** Radical prostatectomy maintains its place of choice in the treatment of localized or locally advanced prostate cancer. It improves recurrence-free survival.

Keywords

Radical Prostatectomy, Sylvanus Olympio

1. Introduction

Prostate cancer (PC) is the first cancer affecting men over the age of 50 and the second leading cause of cancer death worldwide after bronchopulmonary cancer [1] [2] [3]. In 2013, at the Sylvanus Olympio University Hospital Center (SO-UHC) in Lomé, its incidence was 77.3 cases and radical prostatectomy as the main indication in localized and locally advanced forms has been practiced for nearly a decade. Several studies have been conducted on different aspects of prostate cancer in Togo [4]. To our knowledge, none has been devoted specifically to radical prostatectomy. The purpose of this work is to evaluate the indications, technique and results of radical prostatectomy in SO-UHC of Lomé.

2. Patients and Methods

Over a period of 6 years (January 2015-December 2020) carried out in the Urology Andrology department of the SO-UHC of Lomé this descriptive retrospective study. Included in this study were patients who underwent radical prostatectomy during this period and whose records contained all the following parameters studied: patient age, general condition according to OMS stage, TNM stage (2016 version), preoperative and postoperative total prostate specific antigen (TPSA) level, ISUP score, d'Amico classification, BRIGANTI score, post-operative follow-up information according to Clavien Dindo at 3 months, 6 months and 12 months (This follow-up included: Anemia, quality of urination, erectile function, total PSA level), pTNM. Biological recurrence was concluded in front of a PSA level ≥ 0.2 ng/ml on two successive dosages. This data was collected by means of a pre-established survey form. The information was obtained through a descriptive analysis of patient records. The data were processed according to the Epi info version 3.3.2 software and some correlation was tested by the chi-two calculation with a probability threshold of 0.05. Compliance with the rules established for the conduct of scientific research within the teaching hospital center has been a priority.

3. Results

3.1. Epidemiology

In 6 years, out of 209 patients hospitalized for prostate cancer, 24 (11.48%) had

benefited from radical prostatectomy. The mean age of patients was 63.8 ± 4.2 years, with the extremes of 57 and 70 years. The modal class was that of patients aged 60 - 70 years (75%).

3.2. Indications and Technique

The indication for prostatectomy was made in patients under 70 years of age and/or in good general condition, absence of metastasis after TNM classification or oligo metastatic. Lymph node dissection was performed in all patients.

The mean PSA level was 27.9 ± 21.2 ng/ml with the extremes of 7.15 and 89.2 ng/ml. Fifty percent (50%) of patients had a PSAT above 20 ng/ml (**Table 1**).

Thirty-seven point five (37.5%) percent of patients were classified as ISUP 1. Prostatic MRI was performed in 45.8% and none underwent bone scintigraphy. 58.3% of patients were classified as high risk of d'Amico. The BRIGANTI score was >5 in 87.5% of patients. The approach was retropubic with ilio-obturator lymph node dissection first in all patients. The average duration of surgical intervention was 223.75 ± 38.14 min, with the extremes of 150 and 290 min.

Clavien Dindo grade 2 complications were the most common, dominated by anemia in 91.7% of patients; 12 months after the surgery, 19.1% of patients had major urinary incontinence. Erectile dysfunction was persistent in 66.7% of patients until the twelfth postoperative month. The distribution of patients according to postoperative clinical outcome is recorded in **Table 2**.

Table 1. Distribution of patients according to PSA level (ng/ml).

	n	%
<4	0	0
[4 - 10]	4	16.7
]10 - 20]	8	33.3
>20	12	50
Total	24	100

Table 2. Distribution of patients according to the quality of urination and erection.

	3 months		6 months		12 months	
	n	%	n	%	n	%
Urination quality						
Good continence	3	12.5	17	73.9	17	80.9
Dysuria	3	12.5	1	4.3	0	0
Incontinence	16	66.7	4	17.4	4	19.1
RAU	2	8.3	1	4.3	0	0
Total	24	100	23	100	21	100
Erectile function						
Erectile dysfunction	23	95.8	16	69.6	14	66.7
Satisfying erection	1	4.2	7	30.4	7	33.3
Total	24	100	23	100	21	100

Six (6) patients presented a positive margin (R1), 5 patients had lymph node invasion (N1). 6 patients had a pTNM stage above or equal to T3. The distribution of patients according to postoperative cancer outcome is reported in **Table 3**.

Hormone therapy and adjuvant radio-hormonotherapy were performed in 45.8% and 4.2% of patients respectively. It played a role in postoperative Total PSA levels. **Figure 1** shows the evolution of the Total PSA level in all patients at 3, 6 and 12 months.

Twenty-five percent (25%) of the patients had presented a biological recurrence, including 20.8% at six months and 4.2% at 12 months.

Table 3. Distribution of patients according to pTNM classification.

	n	%
pT2aN0R0	3	12.5
pT2bN0R0	3	12.5
pT2bN0R1	1	4.2
pT2bN1R0	1	4.2
pT2cN0R0	8	33.3
pT2cN0R1	1	4.2
pT2cN1R1	1	4.2
pT3aN0R0	2	8.4
pT3aN1R1	2	8.3
pT3bN0R1	1	4.2
pT4N1R0	1	4.2
Total	24	100

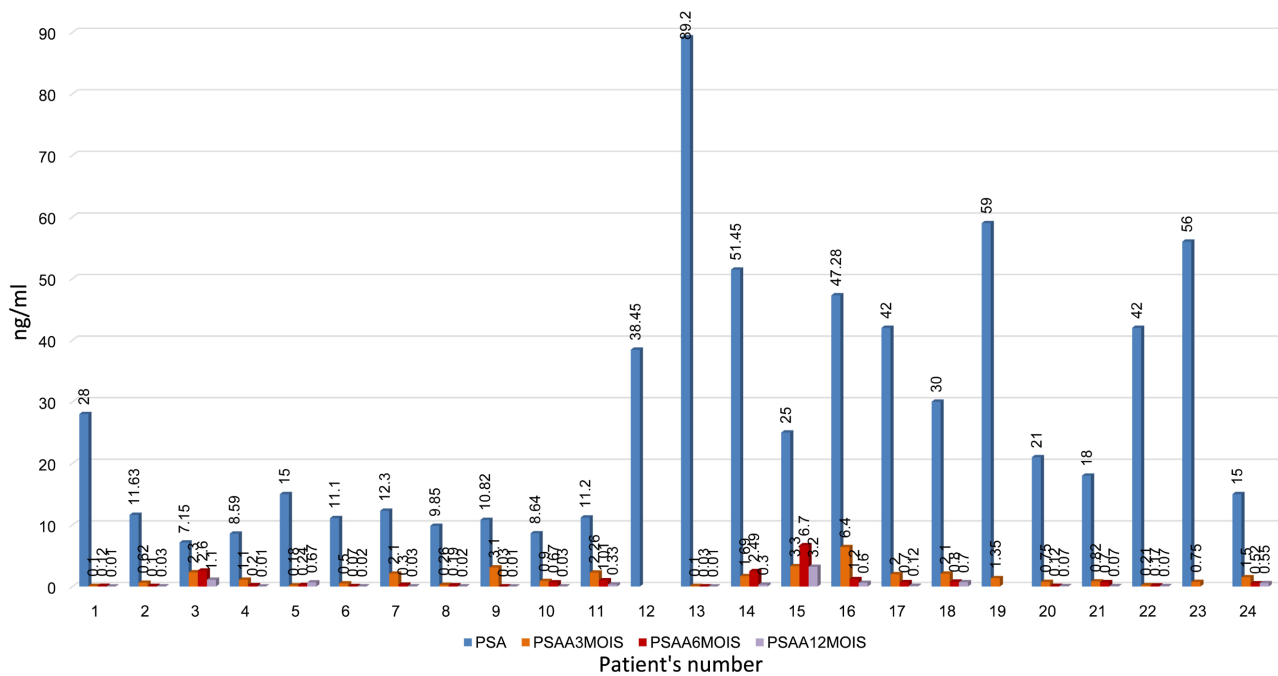


Figure 1. Postoperative evolution of the total PSA level during the first year.

Three patients had died: 1 to 3 months and 2 to 6 months. The recurrence-free survival rate was 66.7% at 6 months and 62.5% at 12 month. There was no statistical correlation between death and pTNM stage ($p = 0.2$).

4. Discussion

The limitations of this study lie in its retrospective nature. Not all patients have had the complete extension assessment, which is difficult to access. However, it reflects the reality of the practice and allows for self-assessment in the practice of radical prostatectomy in Sylvanus Olympio University Hospital Center of Lomé.

The mean age of the patients was 63.8 ± 4.2 years, similar to data in the literature. The average PSA rate (27.9 ± 21.2 ng/ml) is high. Mrabti *et al.* in Morocco and Stephen *et al.* in Ghana reported 12.7 and 15.3 ng/ml respectively [5] [6] [7] [8]. The delay in diagnosis linked to a delay in consultation of patients in this study explains it. Although strongly recommended for pre-biopsy and for the assessment of extension [9], only 45.8% performed morphological prostate MRI. Indeed, it is hardly accessible financially in this context. 58.3% of patients were at high risk of d'Amico. Ndiaga *et al.* in Senegal reported 85% [10] while Leon *et al.* 35.2% [11] in France. This staging considerably influences the postoperative results.

As Ndiaga, the approach was retropubic with lymph node dissection first in all patients. The minimally invasive approach is recommended [12] but has suffered from the limitations of the technical platform in this context.

In this series, the positive margin rate is high (25%). Ndiaga reported 11.6% positive margin cases and 6.7% lymph node involvement [10]. It may be related not only to the evolutionary stage but also to the non-performance of prostate MRI in all patients. Tambwe *et al.* found a 33.5% positive margin in France but with a series of 319 patients [13]. Complications were very frequent: Anemia (91.7%), and anastomotic leak (4.2%). 3 deaths, *i.e.* 12.5%, were recorded (grade 5 Clavien), including one at 3 months and two at 6 months, in patients at high risk of d'Amico. Authors have reported lower death rates [14] [15] but all patients are at high risk of d'Amico. The high risk of d'Amico is therefore a morbidity factor linked to the procedure. The minimally invasive robotic approach is marred by a lower rate of urinary incontinence. Laroche *et al.* in France [15] reported on a series of robot-assisted prostatectomy 13% incontinence at 12 months of follow-up. Our high rate (19.1%) of incontinence is linked to the approach via laparotomy and also the limited technical platform that does not offer appropriate instrumentation for precision in the gesture. Moreover, the same reasons explain the high rate (66.7%) of erectile dysfunction at 12 months of follow-up.

The biological recurrence rate recorded here was higher than those found by Ndiaga in Senegal (18.3%) and Stephen in Nigeria (8.8%) [8]. This is because of the high rate of positive margins on the surgical specimen.

5. Conclusion

Radical prostatectomy is one of the curative means of localized or locally ad-

vanced prostate cancer performed in Togo. A small proportion of patients were eligible for this indication. The retropubic route with ilio-obturator lymph node dissection was the only performed technique. The oncological results were satisfactory with a relatively low recurrence rate and satisfactory overall survival at 1 year, improved by multimodal management.

Conflicts of Interest

The authors declare that they have no conflicts of interest related to this article.

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