

# Clinical Aspects and Functional Disorders in Patients with Genital Prolapse in Butembo

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# Abstract

Introduction: Genital prolapse is a health problem that gynaecologists are increasingly facing due to patients' legitimate demands for care and the improvement in life expectancy without associated disabilities. The objective of this work was to evaluate the clinical aspects and functional disorders of patients with genital prolapse in Butembo in Democratic Republic of the Congo (DRC). Material and Methods: A descriptive study with analytical aims was conducted from January 1 to September 30, 2024 in Butembo/DRC. It involved 112 patients with symptomatic genital prolapse in whom an interview on functional disorders as well as clinical assessment according to the Baden and Walker classification were carried out. The data were entered into Microsoft Office LTSC 2021 Excel software and analysed using R software version 4.4.0. Results: Patients aged over 50 years were exposed to developing genital prolapse especially the mixed type (81.1%) compared to those aged under 50 years (p-value 0.014). Multi and large multiparous women had developed all types of prolapse especially the mixed type (100%) compared to primiparous and pauciparous women (p-value 0.027). Associated pathologies were more observed in case of mixed prolapse (51.4%) including vesicovaginal fistula (37.8%) (p-value < 0.008). Urinary incontinence was more observed in cases of cystocele (90.0%), hysterocele (81.8%) and mixed prolapse (89.2%), lack of sexual desire was more observed in cases of mixed prolapse (54.1%) and

rectocele (50.0%), on the other hand, constipation was observed in cases of rectocele (71.4%) and mixed prolapse (59.5%) (p-value < 0.001). **Conclusion:** Genital prolapse is common and functional urinary, sexual and anorectal signs are frequently observed in patients in Butembo/DRC.

#### Keywords

Genital Prolapse, Functional Disorders, Urinary Incontinence, Anorectal Disorders, Butembo

### 1. Introduction

Genital prolapse remains a public health problem and is a common female functional pathology that can have a significant impact on quality of life [1]. It affects millions of women worldwide, particularly in low-income countries, and is a health problem that gynaecologists are increasingly confronted with due to legitimate patient care demands and improved life expectancy without associated disability [2] [3].

Worldwide, approximately 40% of women develop genital prolapse and this proportion increases with aging [4].

In Canada, urogenital prolapse represents 13% of hysterectomy indications and in the United States, 500,000 procedures are performed each year [5] [6].

In low-income countries, the prevalence of genital prolapse is between 2.9 and 41.1% [7]. Several studies have been conducted at the African level and have found varying prevalences depending on the region (Ethiopia: 22.70%, Uganda: 27.5%, Ghana: 12%) [8]-[10].

The severity of genital prolapse is mainly assessed according to its impact on the patient's quality of life in terms of functional or psychosocial discomfort. Women with symptomatic genital prolapse have functional urinary disorders (stress urinary incontinence, dysuria, etc.) and/or anorectal disorders (constipation, anal incontinence) [11]. Complications are directly related to the exteriorization of vulvar swelling, which exposes to infections, haemorrhages and ulcerations of the vaginal mucosa or cervix [12].

Genital prolapse is associated with negative physical, social, psychological and sexual experiences. [13] [14] In advanced stages, prolapse manifests with disabling physical symptoms such as difficulty walking, sitting, and squatting, which negatively impacts these women's daily economic activities, such as farming, and ultimately leads to poverty [3] [4]. Women with genital prolapse have reported limitations in their sexual life such as: lack of sexual desire, lack of arousal, lack of orgasm, and pain during intercourse, which ultimately leads to loss of sexual interest, with some being abandoned by their husbands. Genital prolapse also leads to psychological and mental health problems, including emotional disturbances, depression, loss of self-esteem, lack of sleep, rejection, and isolation [15] [16]. This female pathology involves risk factors such as pregnancy, vaginal delivery especially with a large fetus, high parity, advanced age, history of prolapse, pelvic

surgery (hysterectomy), comorbidities (dyschezia, chronic cough) and genetic predisposition [17]. Other lifestyle factors that can possibly be modified include obesity, smoking and factors such as certain physical activities (heavy lifting, heavy manual work) and sports [18] [19].

Hundreds of millions of women suffer from genital prolapse, often in silence and do not disclose their problems due to the social stigma associated with it or lack of access to treatment services. The magnitude of the problem therefore remains largely unknown in our developing countries [20].

Treatment is mainly surgical and has been shown to significantly improve women's quality of life [2].

Women in Butembo are exposed to risk factors for genital prolapse, including a high rate of childbirth, mainly rural activities during which women carry heavy loads; however, the prevalence of genital prolapse is not known.

This study aims to describe the clinical aspects and assess functional disorders in patients with genital prolapse in the Democratic Republic of Congo, and more specifically in the city of Butembo.

# 2. Materials and Methods

### Study site

This multisite study was conducted in the city of Butembo, in the Democratic Republic of Congo, from January 1 to September 30, 2024. For this study, we selected the following three hospitals: Graben University Clinics (CUG), Matanda Hospital, Fistula Program Clinic (FISPRO). The choice of these hospitals was justified by their high attendance of gynaecological cases, the presence of at least one gynaecologist in each structure and the existence of a technical platform adapted to the management of genital prolapse in the context of countries with limited resources.

### Design, sample, eligibility and exclusion criteria

This was a descriptive cross-sectional study with analytical aim that involved all patients diagnosed with genital prolapse. The sampling was exhaustive, and the sample consisted of 112 patients with symptomatic genital prolapse according to the Baden and Walker classification, and whose functional results were evaluated in the gynaecology department of our three hospitals during the study period. In this work, all patients over 18 years old with genital prolapse were included. Pregnant women with genital prolapse and those under 18 years old were excluded.

### Data collection

Data collection was prospective. For this reason, a previously developed data collection form allowed us to collect useful information from patients diagnosed with genital prolapse. During this study, patients with prolapse, after assessing their eligibility and obtaining their written and informed consent, were examined for clinical elements and functional results according to the type of genital prolapse by a member of the research team.

The data collection team consisted of a principal investigator/examiner and 5 secondary investigators/examiners including 2 specialists in gynaecology.

To ensure completeness and avoid a probable refusal by patients to participate in the study, a free care campaign was organized as part of this study to facilitate access to care for all social strata of the population.

### Study variables

The study variables were collected on a data collection sheet. The dependent variable was genital prolapse, while the independent variables were sociodemographic and gynaecology characteristics (age, parity, body mass index, menopausal status), type and degree of prolapse, consultation time, reason for consultation, pathologies associated with prolapse, type of associated pathologies, types of disorders (urinary, sexual, digestive, psychological).

### Data analysis and processing

The data collected using the collection sheets were entered into Microsoft Office LTSC 2021 Excel to create a database. They were then exported for analysis using R software version 4.4.0. To describe our sample, we calculated the numbers and their percentages for categorical variables, the means and their standard deviations for quantitative variables with normal distribution. In bivariate analyses, the comparison of percentages was carried out using Fisher's exact test and/or Pearson's Chi-square test according to their validity conditions for categorical variables; The comparison of means was performed using one-way analysis of variance (ANOVA). A p value of less than 0.05 was considered statistically significant.

#### Ethical considerations

We received authorization from the Ethics Committee of the Catholic University of Graben through notification of notice N: PMS. 02/24/UCG/CERM. We also received authorization from the medical directors of the hospitals in which we conducted our study as well as from the head physicians of their area of responsibility. Informed consent was offered to patients before their inclusion in the study. Security measures regarding the confidentiality of the information collected were guaranteed by anonymity during the collection, processing and analysis of the results.

### 3. Results

# 1) Bivariate analysis of general characteristics of patients according to types of prolapse

Patients aged over 50 years were exposed to developing cystocele (54.0%), rectocele (64.3%) and mixed prolapse (81.1%) compared to those aged under 50 years. The difference was statistically significant (p-value = 0.014). As for the parity of patients, multi and large multiparous women were exposed to developing all types of prolapse (cystocele = 86.0%, hysterocele = 81.8%, rectocele = 85.7% and mixed prolapse = 100%) compared to primiparous and pauciparous women (p-value = 0.027) (**Table 1**).

# 2) Bivariate analysis of clinical characteristics of patients according to types of prolapse

### a) Onset of symptoms and reasons for consultation

In this study, it was observed that patients with mixed prolapse consulted late

(9.6 years), followed by those with rectocele (7.7 years). The difference is not statistically significant (p-value = 0.4). Regarding the reasons for consultation, the vaginal ball was more observed in cases of hysterocele and mixed prolapse in 100% against only 64.3% and 88.0% of cases observed in cases of rectocele and cystocele respectively. The difference is statistically significant (p-value = 0.0022) (Table 2).

### b) Degree and pathologies associated with prolapse

The third degree of prolapse was more observed in all types of prolapse

Variables	<b>Cystocele</b> $N = 50^1$	Hysterocele $N = 11^1$	Rectocele $N = 14^1$	$Mixed$ $N = 37^{1}$	<b>Total</b> $N = 112^1$	p-value <sup>2</sup>
Age (year)						0.014
≤50	23 (46.0%)	7 (63.6%)	5 (35.7%)	7 (18.9%)	42 (37.5%)	
>50	27 (54.0%)	4 (36.4%)	9 (64.3%)	30 (81.1%)	70 (62.5%)	
Parity						0.027
Primiparous	2 (4.0%)	0 (0.0%)	2 (14.3%)	0 (0.0%)	4 (3.5%)	
Pauciparous	5 (10.0%)	2 (18.2%)	0 (0.0%)	0 (0.0%)	7 (6.3%)	
Multi/large multiparous	43 (86.0%)	9 (81.8%)	12 (85.7%)	37 (100.0%)	101 (90.2%)	
Menopausal status						0.2
Yes	35 (70.0%)	7 (63.6%)	9 (64.3%)	32 (86.5%)	83 (74.1%)	
No	15 (30.0%)	4 (36.4%)	5 (35.7%)	5 (13.5%)	29 (25.9%)	
BMI						0.2
Thinness	7 (14.0%)	2 (18.2%)	1 (7.1%)	4 (10.8%)	14 (12.5%)	
Normal	38 (76.0%)	7 (63.6%)	8 (57.2%)	22 (59.5%)	75 (67.0%)	
Overweight/Obesity	5 (10.0%)	2 (18.2%)	5 (35.7%)	11 (29.7%)	23 (20.5%)	

Table 1. Distribution of cases according to bivariate analysis of general characteristics of patients according to types of prolapse

<sup>1</sup>n (%); <sup>2</sup>Fisher's exact test; chi-square test of independence.

Table 2. Distribution of cases according to the onset of symptoms and reasons for consultation.

Variables	<b>Cystocele</b> $N = 50^1$	Hysterocele $N = 11^1$	Rectocele $N = 14^1$	$Mixed$ $N = 37^1$	<b>Total</b> N = 112 <sup>1</sup>	p-value <sup>2</sup>
Consultation deadline						
Mean (SD)	7.5 (7.1)	6.4 (4.9)	7.7 (6.6)	9.6 (6.4)	8.1 (6.6)	0.4
Reason for consultation						
Vaginal ball						0.0022
Yes	44 (88.0%)	11 (100.0%)	9 (64.3%)	37 (100.0%)	101 (90.2%)	
No	6 (12.0%)	0 (0.0%)	5 (35.7%)	0 (0.0%)	11 (9.8%)	

<sup>1</sup>Mean (SD); n (%); <sup>2</sup>One-way analysis of variance; chi-square test of independence.

(cystocele = 88.0%, hysterocele = 100.0%, rectocele = 92.9% and mixed prolapse = 51.4%). The difference is statistically significant (p-value < 0.001). As for the associated pathologies, they were more observed in cases of mixed prolapse (51.4%) and hysterocele (27.3%) compared to cystocele (18.0%) and rectocele (21.4%); among which the vesicovaginal fistula which was more observed in cases of mixed prolapse (37.8%) and rectocele (21.4%). The difference is statistically significant (p-value = 0.008) (Table 3).

Variable	28	$\begin{array}{l} \textbf{Cystocele} \\ N = 50^1 \end{array}$	Hysterocele $N = 11^1$	<b>Rectocele</b> $N = 14^1$	$Mixed$ $N = 37^1$	<b>Total</b> $N = 112^1$	p-value <sup>2</sup>
Degree	of prolapse						<0.001
Tw	70	6 (12.0%)	0 (0.0%)	1 (7.1%)	2 (5.4%)	9 (8.0%)	
Th	ree	44 (88.0%)	11 (100.0%)	13 (92.9%)	19 (51.4%)	87 (77.7%)	
For	ur	0 (0.0%)	0 (0.0%)	0 (0.0%)	16 (43.2%)	16 (14.3%)	
Patholog	gies associated						0.008
Yes	3	9 (18.0%)	3 (27.3%)	3 (21.4%)	19 (51.4%)	34 (30.4%)	
No		41 (82.0%)	8 (72.7%)	11 (78.6%)	18 (48.6%)	78 (69.6%)	
Types of	f associated pathologies						0.008
No	ne	41 (82.0%)	8 (72.7%)	11 (78.6%)	18 (48.7%)	78 (69.6%)	
Ve	sicovaginal fistula	3 (6.0%)	1 (9.1%)	3 (21.4%)	14 (37.8%)	21 (18.8%)	
Ute	erine fibroids	3 (6.0%)	0 (0.0%)	0 (0.0%)	3 (8.1%)	6 (5.4%)	
Uri	inary incontinence	1 (2.0%)	1 (9.1%)	0 (0.0%)	2 (5.4%)	4 (3.6%)	
Cer	rvical cancer	2 (4.0%)	1 (9.1%)	0 (0.0%)	0 (0.0%)	3 (2.6%)	

	Table 3.	Distribution	of cases	according to	the degree	and patho	logies	associated	with	prolapse.
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<sup>1</sup>n (%); <sup>2</sup>Fisher's exact test; <sup>3</sup><sub>C</sub>hi-square test of independence.

### c) Urinary disorders in female patients

Urinary incontinence was more observed in cystocele (90.0%), hysterocele (81.8%) and mixed prolapse (89.2%); dysuria in cystocele (52.0%) and mixed prolapse (70.3%); urgency and pollakiuria in mixed prolapse (75.7% and 54.1%); stress urinary incontinence in cystocele (78.0%), hysterocele (72.7%) and mixed (89.2%). The difference is statistically significant (p-value < 0.001) (Table 4).

### d) Sexual, digestive and psychological disorders of female patients

Urinary incontinence during sexual intercourse was more observed in mixed prolapse (67.6%) followed by hysterocele (36.4%) compared to rectocele (0.0%) and cystocele (20.0%). Lack of sexual desire was more observed in mixed prolapse (54.1%) and rectocele (50.0%) compared to hysterocele (9.1%) and cystocele (4.0%). As for digestive disorders, constipation was more observed in rectocele (71.4%) and mixed prolapse (59.5%) compared to cystocele (10.0%) and hysterocele (36.4%). The difference is statistically significant (p-value < 0.001) (Table 5).

Variables	Cystocele	Hysterocele	Rectocele	Mixed	Total	p-value
	$N = 50^{1}$	$N = 11^{1}$	$N = 14^{1}$	$N = 37^{1}$	$N = 112^{1}$	<b>I</b>
Urinary incontinence						< 0.001 <sup>2</sup>
Yes	45 (90.0%)	9 (81.8%)	2 (14.3%)	33 (89.2%)	89 (79.5%)	
No	5 (10.0%)	2 (18.2%)	12 (85.7%)	4 (10.8%)	23 (20.5%)	
Dysuria						<0.0013
Yes	26 (52.0%)	3 (27.3%)	0 (0.0%)	26 (70.3%)	55 (49.1%)	
No	24 (48.0%)	8 (72.7%)	14 (100.0%)	11 (29.7%)	57 (50.9%)	
Incomplete urination						0.82
Yes	12 (24.0%)	2 (18.2%)	2 (14.3%)	10 (27.0%)	26 (23.2%)	
No	38 (76.0%)	9 (81.8%)	12 (85.7%)	27 (73.0%)	86 (76.8%)	
Urgency						< 0.0013
Yes	25 (50.0%)	3 (27.3%)	0 (0.0%)	28 (75.7%)	56 (50.0%)	
No	25 (50.0%)	8 (72.7%)	14 (100.0%)	9 (24.3%)	56 (50.0%)	
Daytime pollakiuria						<0.001 <sup>2</sup>
Yes	17 (34.0%)	1 (9.1%)	0 (0.0%)	20 (54.1%)	38 (33.9%)	
No	33 (66.0%)	10 (90.9%)	14 (100.0%)	17 (45.9%)	74 (66.1%)	
Stress incontinence urinary						<0.001 <sup>2</sup>
Yes	39 (78.0%)	8 (72.7%)	0 (0.0%)	33 (89.2%)	80 (71.4%)	
No	11 (22.0%)	3 (27.3%)	14 (100.0%)	4 (10.8%)	32 (28.6%)	

 Table 4. Distribution of cases according to urinary disorders.

<sup>1</sup>n (%); <sup>2</sup>Fisher's exact test; <sup>3</sup>chi-square test of independence.

Table 5. Distribution of cases according to sexual, digestive and psychological disorders.

Variables	Cystocele $N = 50^1$	Hysterocele $N = 11^1$	<b>Rectocele</b> $N = 14^1$	$Mixed$ $N = 37^1$	<b>Total</b> $N = 112^1$	<b>p-value</b> <sup>2</sup>
Sexual disorders						
Urinary incontinence du	uring sexual intercourse	•				<0.001
Yes	10 (20.0%)	4 (36.4%)	0 (0.0%)	25 (67.6%)	39 (34.8%)	
No	40 (80.0%)	7 (63.6%)	14 (100.0%)	12 (32.4%)	73 (65.2%)	
Dyspareunia						0.1
Yes	18 (36.0%)	8 (72.7%)	6 (42.9%)	20 (54.1%)	52 (46.4%)	
No	32 (64.0%)	3 (27.3%)	8 (57.1%)	17 (45.9%)	60 (53.6%)	
Hyposensitivity during s	sexual intercourse					0.4
Yes	31 (62.0%)	10 (90.9%)	10 (71.4%)	29 (78.4%)	80 (71.4%)	
No	19 (38.0%)	1 (9.1%)	4 (28.6%)	8 (21.6%)	32 (28.6%)	

Lack of sexual desire						<0.001
Yes	2 (4.0%)	1 (9.1%)	7 (50.0%)	20 (54.1%)	30 (26.8%)	
No	48 (96.0%)	10 (90.9%)	7 (50.0%)	17 (45.9%)	82 (73.2%)	
Digestive disorders						
Constipation						<0.001
Yes	5 (10.0%)	4 (36.4%)	10 (71.4%)	22 (59.5%)	41 (36.6%)	
No	45 (90.0%)	7 (63.6%)	4 (28.6%)	15 (40.5%)	71 (63.4%)	
Anal incontinence						0.2
Yes	1 (2.0%)	0 (0.0%)	2 (14.3%)	3 (8.1%)	6 (5.4%)	
No	49 (98.0%)	11 (100.0%)	12 (85.7%)	34 (91.9%)	106 (94.6%)	
Psychological disorders						0.8
Yes	43 (86.0%)	9 (81.8%)	33 (89.2%)	12 (85.7%)	97 (86.6%)	
No	7 (14.0%)	2 (18.2%)	4 (10.8%)	2 (14.3%)	15 (13.4%)	

<sup>1</sup>n (%); <sup>2</sup>Fisher's exact test; chi-square test of independence.

Continued

### 4. Discussion

Patients over 50 years of age were at risk of developing genital prolapse of the cystocele (54.0%), rectocele (64.3%) and mixed prolapse (81.1%) type compared to those under 50 years of age. The difference was statistically significant (p-value = 0.014).

Many authors in the literature have demonstrated a strong correlation between age and the occurrence of genital prolapse, including Abdoul Z *et al.* [21] who found that the mean age of patients in their sample was 60.6 years, with extremes of 25 and 91 years.

Furthermore, Ellerkman M *et al.* [22] found that the mean age of women with genital prolapse was 57.2 years; with extremes of 23 and 93 years.

The predominance of genital prolapse at the age of over 50 years could be explained by a large multiparity on the one hand; but also, by the senescence of the organs of the genital tract on the other hand.

As for the parity of patients, multi and large multiparous women were exposed to developing all types of genital prolapse (cystocele = 86.0%, hysterocele = 81.8%, rectocele = 85.7% and mixed = 100%) compared to primiparous and pauciparous women (p-value = 0.027) (Table 1)

It is recognized in the literature that multiparity is a factor associated with the occurrence of all types of genital prolapse.

Our result is consistent with those of Asresie A *et al.* [23] and Muche HA *et al.* [24] in Ethiopia who reported a predominance of multiparous women among patients with genital prolapse, respectively 85.2% of cases and 86% of cases.

During this study, it was observed that patients with mixed type genital prolapse

consulted late (9.6 years), followed by those with rectocele (7.7 years). The difference is not statistically significant (p-value = 0.4). The vaginal ball was more observed in cases of hysterocele and mixed prolapse in 100% against only 64.3% and 88.0% of cases observed in cases of rectocele and cystocele respectively. The difference is statistically significant (p-value = 0.0022) (Table 2).

Regarding the late discovery of genital prolapse, we believe that this situation could be explained by the fact that in our culture everything related to the genitals is considered taboo, especially in older women. As for the reasons for consultation, our results corroborate those obtained by Mouritsen L *et al.* [25] who found that patients with anteroposterior prolapse complained of a lump at or outside the vaginal orifice. The other mechanical symptoms were independent of the compartment involved. Whether or not the middle compartment was also involved had no effect on the mechanical symptoms.

The third degree of prolapse was more observed in all types of prolapse (cystocele = 88.0%, hysterocele = 100.0%, rectocele = 92.9% and mixed 51.4%). The difference is statistically significant (p-value < 0.001).

Our results corroborate those obtained by Mekeme J *et al.* [26] who found the predominance of the 3rd degree over all types of prolapse with 32% of cases.

On the other hand, Somé D *et al.* [27] found that two thirds of patients had 4th degree prolapse.

As for the associated pathologies, they were more observed in cases of mixed prolapse (51.4%) and hysterocele (27.3%) compared to cystocele (18.0%) and rectocele (21.4%); among which the vesicovaginal fistula which was more observed in cases of mixed prolapse (37.8%) and rectocele (21.4%). The difference is statistically significant (p-value = 0.008) (Table 3).

Urinary incontinence was more observed in cystocele (90.0%), hysterocele (81.8%) and mixed prolapse (89.2%); dysuria in cystocele (52.0%) and mixed prolapse (70.3%); urgency and pollakiuria in mixed prolapse (75.7% and 54.1%); stress urinary incontinence in cystocele (78.0%), hysterocele (72.7%) and mixed (89.2%). The difference is statistically significant (p-value < 0.001) (**Table 4**). Urinary incontinence during sexual intercourse was more observed in mixed prolapse (67.6%) followed by hysterocele (36.4%) compared to rectocele (0.0%) and cystocele (20.0%). Lack of sexual desire was more in cases of mixed prolapse (54.1%) and rectocele (50.0%) compared to hysterocele (9.1%) and cystocele (4.0%). As for digestive disorders, constipation was more observed in cases of rectocele (71.4%) and mixed prolapse (59.5%) compared to cystocele (10.0%) and hysterocele (36.4%). The difference is statistically significant (p-value < 0.001) (**Table 5**).

Indeed, several studies have shown that urinary disorders, and in particular urinary incontinence, were very common in patients with cystocele [25].

Diallo A *et al.* [28] found that functional urinary disorders were the most common: 16.4% of patients had urinary incontinence, 26.9% dysuria and 4.5% urinary retention; followed by sexual disorders (20.9% dyspareunia). Furthermore, Estrade JP *et al.* [29] reported that 18.8% of patients had stress urinary incontinence associated with genital prolapse. In addition, women with genital prolapse are more likely to restrict sexual activity for fear of incontinence, although they report similar levels of satisfaction with their sexual relationships [10].

**Study limitations:** One limitation is the prospective nature of the study, which may introduce bias in the reporting and analysis of clinical outcomes.

# **5.** Conclusion

Patients aged over 50 years were exposed to developing genital prolapse. Multi and grand multiparous women had developed all types of prolapse. Associated pathologies were more observed in the case of mixed prolapse, including vesicovaginal fistula. Urinary incontinence was observed more in cases of cystocele, hysterocele and mixed prolapse. Lack of sexual desire was more observed in cases of mixed prolapse and rectocele, on the other hand, constipation was observed in cases of rectocele and mixed prolapse.

# **Conflicts of Interest**

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

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