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Quality of Life of Patients with Indwelling Urinary Catheters at the University Clinic of Urology and Andrology in Cotonou

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Abstract: -

Introduction: Indwelling bladder catheters are a common therapeutic method in urology, with indications ranging from complete urinary retention with or without obstruction to routine bladder drainage. This study was conducted to assess the quality of life of patients with indwelling bladder catheters.

Patients and Methods: This was a descriptive prospective study conducted from April 16 to June 16, 2024. All subjects followed at the University Clinic of Urology and Andrology at the Hubert Koutoukou Maga National Hospital and University Center in Cotonou during this period and who had received an indwelling bladder catheter were included. The quality of life of these patients was evaluated using the Body Image Scale (BIS) and the Patient Health Questionnaire-9 (PHQ-9) for depression.

Results: Thirty subjects participated in the study, including one woman. The average age was 64.04 years, with a range from 36 to 82 years. The average duration of catheter use was 148.23 days, ranging from 14 days to 2520 days. The most frequent indication for indwelling bladder catheter use was complete urinary retention complicating prostatic tumors, affecting 73.34% of patients. The impact of the permanent catheter on daily life was variable, affecting psychological, social, physical, and sexual aspects. Issues included altered body image, job loss, lack of sexual activity, and recurrent urinary infections. 76.67% of patients reported a deterioration in quality of life. Upon learning about the indwelling catheter option, 58.62% of patients were distressed, experiencing sadness, anxiety, disappointment, and sometimes anger. 40% of patients suspended their professional activities, and 56.67% reported a decrease in libido and sexual inactivity.

Conclusion: Prolonged use of an indwelling bladder catheter is a traumatic experience for patients. This therapeutic option negatively impacts patients' quality of life and represents a significant burden for both patients and their families. Self-esteem is affected, quality of life is disrupted, and the financial impact is considerable due to regular catheter changes and complications associated with its use. Implementing a psychosocial support system could alleviate much of the distress experienced by these patients.

Keywords: Indwelling bladder catheter, quality of life deterioration, decreased libido, Cotonou.

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1. Introduction

Bladder catheterization is an invasive procedure that involves inserting a sterile urinary catheter into the bladder via the urethra to ensure continuous urine drainage [1]. The catheter can be either indwelling or intermittent [2]. An indwelling bladder catheter is indicated for urinary incontinence or permanent retention (neurological bladder, benign prostatic hypertrophy in an inoperable patient) when no other alternatives are feasible [3]. When spontaneous urination is not possible, the insertion of an indwelling bladder catheter is required [1, 2, 3]. When transurethral catheterization is not possible, urine drainage can be achieved via a suprapubic route using a cystostomy or cystocatheter.

In the USA, an intra-hospital prevalence of 25% of patients with indwelling bladder catheters has been reported [4]. As a foreign

body, the daily use of a bladder catheter impacts quality of life, particularly in terms of body image perception [5] and psychological state [6] of the patient and their family. This study aims to evaluate the quality of life of patients with indwelling bladder catheters (SAD) followed at the University Clinic of Urology and Andrology in Cotonou.

Patients and Methods

This was a cross-sectional descriptive study with prospective data collection, conducted from April 16, 2024, to June 16, 2024, at the University Clinic of Urology and Andrology (CUUA) at the Hubert Koutoukou Maga National Hospital and University Center (CNHU-HKM) in Cotonou, Benin.

During this period, all patients admitted and treated at CUUA who had an indwelling bladder catheter (SAD), regardless of the etiology, were included. Patients with intermittent catheterization were excluded from the study.

The following variables were studied:

- **Socio-demographic:** age, sex, marital status, occupational activity
- **Clinical:** prior physical autonomy, indication for indwelling bladder catheter, duration of SAD use, type of urinary catheter used, complications of SAD
- **Quality of Life:** assessed by:
    - **Body Image Scale (BIS):** A 10-item questionnaire with four response options scored from 0 to 3. The intensity of body image disturbance is categorized as follows:
        - Score 0–4: No body image disturbance
        - Score 5–14: Mild body image disturbance
        - Score 15–25: Significant body image disturbance
        - Score >25: Severe body image disturbance
    - **Patient Health Questionnaire-9 (PHQ-9):** A self-administered questionnaire with 9 items scored from 0 to 3. Depression severity is categorized as:
        - Score 0–3: No depression
        - Score 4–9: Minimal to mild depression
        - Score 10–14: Moderate depression
        - Score 15–19: Moderately severe depression
        - Score 20–27: Severe depression
    - **Sexual Life:** including the opinions of their partners

Data was collected via a survey form. All subjects were able to complete the BIS and PHQ-9 questionnaires. They provided consent and signed a confidentiality form, as did their partners who gave their opinions on the sexual quality of life of their spouses.

2. Results

2.1 Socio-demographic Variables

- The study included thirty patients, including one woman. The average age was 64.04 years, ranging from 36 to 82 years. The single female participant was 51 years old.
- Professional profiles included 16 retirees (53.33%), 8 civil servants (26.67%), and 6 unemployed individuals (20%).
- 80% of patients were in a relationship. The single female participant was divorced.

2.2 Clinical Variables

- **Prior Physical Autonomy:** Twenty-five patients (n=30), including the sole female participant, had good physical autonomy prior to SAD.
- **Indications for SAD:** 73.34% of patients had prostatic tumors (BPH and cancer). The female participant had SAD due to complete urinary retention related to cervical cancer. Other indications included gangrene of the external genitalia (10%), bladder tumors (10%), and spinal cord injury (3.33%).

Table I: Indications for Indwelling Bladder Catheter

Indications	Frequency	%
Gangrene of the External Genital Organs	3	10
Cervical Neoplasia	1	3.33
Benign Prostatic Hyperplasia	13	43,34
Malignant Prostatic Neoplasia	9	30
Spinal Cord Injury	1	3,33
Bladder Tumor	3	10
Total	30	100

Catheterization Route and Type of Urinary Catheter

- The transurethral route was used for 86.67% of our patients, compared to 13.33% for the suprapubic route.
- Latex urinary catheters were used in 60% of cases, while silicone catheters were used in 40%. The sole female participant in the study had a transurethral latex catheter.

Duration of Indwelling Catheter Use

The average duration of indwelling bladder catheter use was 148.23 days, with a range from 14 days to 2520 days. The single female participant used the catheter for 17 days.

Complications Related to Indwelling Catheter

Twenty-two patients, or 73.33%, experienced complications related to the indwelling catheter. These complications included:

- Catheter obstruction episodes in 43.33% of subjects, including the sole female participant.
- Hematuria at vacuum in 13.33%.
- Urinary leaks in 10%.
- Urinary infections in 6.67%.

Table II: Complications Related to Indwelling Bladder Catheter

Types of complication	Effectif	Pourcentage (%)
Urinary leaks	3	10,00
Hematuria	4	13,33
Urinary infections	2	06,67
Obstruction	13	43,33
None	8	26,67
Total	30	100,00

2.3 Quality of Life

The quality of life of the study subjects was assessed through their social interactions, perception of body image since the indwelling catheter (SAD), psychological state, and sexuality.

Psychosocial Impact

- Upon being informed about the therapeutic option of indwelling bladder catheterization or discovering it in some cases (initial consciousness disturbance upon catheter insertion), 46.67% of patients reported emotional upheaval that was difficult for them to describe. Other patients reported sadness (33.33%), anxiety (16.67%), and disappointment (3.33%). The sole female participant felt anxious.
- The perception of body image was evaluated using the Body Image Scale (BIS). Twenty-three patients (n=30) experienced a deterioration in their body image perception. This deterioration was slight in 10 subjects, significant in 4 subjects, and very significant or severe in 9 subjects, including the only female participant.

The distribution of patients according to their body image perception is presented in Figure 1.

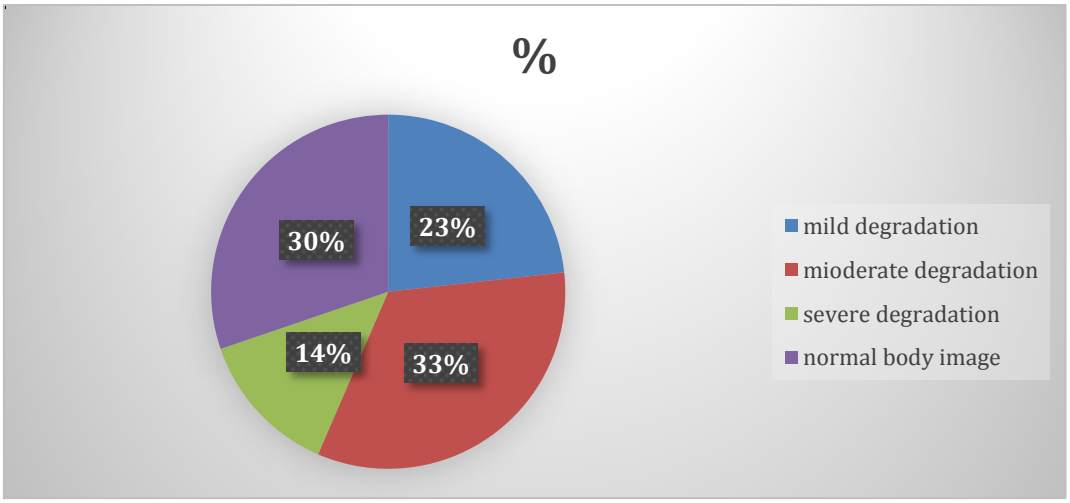

Figure 1 : Répartition des patients selon l'image corporelle.

- 62.50% of the subjects reported an impact of the indwelling bladder catheter (SAD) on their social relationships. This included social exclusion from their surroundings in 25.83% of cases and a sense of a complete cessation of social interactions in 36.67%. No impact of the SAD on social relationships was reported by the female participant in the study.

- During the study, 12 patients (n=30), including the sole female participant, reported an impact on their professional activities. This impact included an inability to perform professional and/or daily tasks, and a reduction or even suspension of professional activities.
- The psychological state of the patients was evaluated using the PHQ-9 self-administered questionnaire, which assesses the presence of depression. Seven patients (n=30) showed signs of depression, ranging from mild (3 subjects), moderate (2 subjects, including the female participant), to moderately severe (2 subjects).

Figure 2 presents the depressive state of the patients.

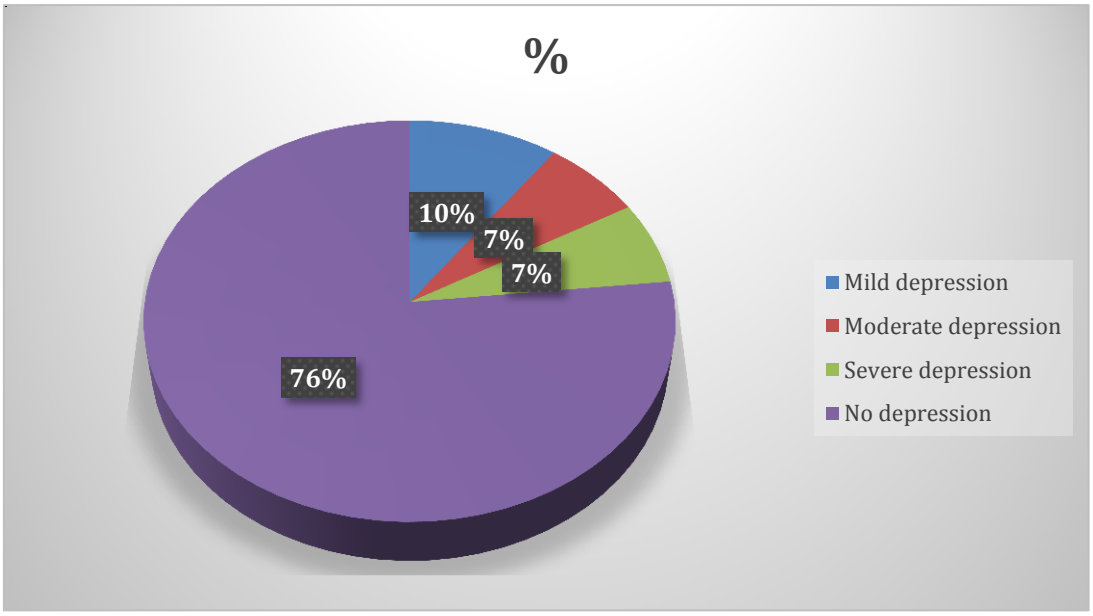

Figure 2 : Répartition des patients selon la dépression.

2.3 Sexual Quality of Life

- 56.67% of the patients reported a decrease in libido. A survey of 24 partners revealed that 54.17% experienced a reduced sexual attraction towards patients with an indwelling bladder catheter (SAD).
- 66.67% of the couples surveyed reported a deterioration in their sexual life.

3. Discussion

3.1 Socio demographic Variables

- **Age**

The average age of our patients, 64.04 years, was similar to that reported by Okewole RW [7] and Atakro C [8], but differs from the 49 years reported by Welk B in the USA [9]. The similarity in average ages between our series and those of Ojewola and Atakro [7, 8] can be attributed to the prevalence of prostate tumors among men over 50. The discrepancy with Welk's average age [9] may be due to differences in sample size and study population selection, as Welk [9] focused on patients with impaired bladder function following traumatic spinal cord injury, which is more common in younger individuals.

- **Marital Status**

In our series, 24 patients (80%) were in a relationship. In Atakro C's study [7] in Ghana, 12 patients (63.15%) were married. The high rate of SAD patients being in relationships in our study aligns with the average age of the subjects and underscores the cultural significance of being **in a relationship in Africa.**

- **Professional Activity**

53.33% of our patients were retired. In contrast, BOISRAME [10] in France reported all patients as retirees with an average age of 89 years. Atakro et al [7] in Ghana found that many respondents were fatigued with formal jobs, limiting their daily activities. Similarly, in our study, many retired participants engaged in informal jobs like trade or agriculture, which were reduced after the placement of SAD. Those still working reported a negative impact on their formal job activities. The loss of urinary continence and discomfort associated with SAD likely contributed to the abandonment of professional activities.

3.2 Clinical Variables

- **Pre-SAD Autonomy**

In our study, 83.33% of patients had good physical autonomy prior to SAD placement. BOISRAME [10] in France found 23% of patients had autonomy, while Fowler S [11] in the UK reported mixed responses, with some patients striving for better autonomy and others resigning to life with a catheter. The difference may be due to the study setting, as BOISRAME focused on a geriatrics unit with many patients having comorbidities affecting physical autonomy.

- **Indications for SAD**

Complete bladder retention due to prostate tumors was the most common indication for SAD in our series, 73.34%, slightly higher than the 64% reported by Adejumo [12] in Nigeria. This difference could be due to sample size and type, as Adejumo [12] included only patients with obstructive prostate tumors. In women, external compression of the bladder by a gynecological pelvic tumor can

lead to urinary retention, as seen in the sole female participant in our study. BOISRAME [10] in France found 3% (n=138) with retention due to clotting, with 25% having gynecological histories.

- **Type of Catheter and Complications**

In our series, 73.33% of patients experienced complications, including catheter obstruction in 43.33% and recurrent urinary infections in 6.67%. Okewole [13] in Nigeria reported 38.7% obstruction among 353 patients (n=615). Vallée et al [14] in France noted 40-50% obstruction and around 30% urinary infections. BOISRAME [10] reported 76% complications, including 46% with acute renal failure linked to complete bladder retention. The higher complication rate in BOISRAME's study could be due to the older age and higher comorbidity of their patients.

Oral dehydration and improper catheter management can contribute to obstructions. The use of latex catheters, which are softer and prone to obstruction, may also explain recurrent urinary infections [2, 14]. Silicone catheters, often used for indwelling catheters, are generally better tolerated [4]. Proper hydration, catheter positioning, and regular catheter changes are essential for minimizing complications.

3.3 Quality of Life

- **Psychosocial Impact**

58.62%** of patients reported significant emotional turmoil, including sadness, anxiety, and disappointment. Ojewola RW [7] in Nigeria found that 70% of patients experienced psychological impacts from SAD, which is higher than our finding of 58.62%. The PHQ-9 questionnaire revealed depressive states in 23.33% of our patients, ranging from mild to moderately severe.

76.67% of patients experienced a degradation of body image. Fowler S [11] in the UK identified shame and embarrassment, with the catheter serving as a constant reminder of chronic illness and vulnerability. The psychological impact of SAD is well-documented but not extensively studied in relation to overall quality of life.

62.50% of patients reported an impact of SAD on their social relationships, including social exclusion and a complete cessation of social interactions. Professional activities were also affected, with patients unable to perform tasks and potentially reducing or suspending work. Adejumo PO [8] in Nigeria noted similar disruptions in daily life due to catheter issues.

- **Sexual Quality of Life**

We observed a decrease in libido in 56.67% of patients. Atakro [8] in Ghana reported similar findings. The presence of an indwelling catheter limits sexual activity and decreases libido. Partners also experienced reduced sexual attraction, further impacting sexual activity. This perception of the body as "disgusting" likely contributes to the avoidance of sexual activity.

Conclusion

An indwelling bladder catheter represents a significant burden in the daily life of patients, negatively affecting their medical, psychosocial, and sexual quality of life. The impact of this therapeutic option is often underestimated by healthcare providers. For quality care, it is crucial to provide psychological preparation and support to patients eligible for SAD, through support groups and encouraging family involvement in their care.

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