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## Urethroscopy in the Urology Department of the Zinvie La Croix Hospital AU Benin: Indications and Results

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### Abstract

**Background:** Urethroscopy is a basic endoscopic examination in urology. The aim of this study was to describe the indications and results obtained during urethroscopy in patients received and treated in the urology department of the Zinvie La Croix Hospital in Benin. **Patients and methods:** It was a prospective descriptive study conducted in the urology department of the Zinvie La Croix Hospital from January 1st, 2022 to July 30th, 2022, involving 92 patients. The variables studied were: age, sex, indication for urethroscopy and results obtained. **Results:** Of the 92 patients collected, there were 72 men (78.2%) and 20 women (21.7%); the sex ratio was 3.6. The age of the patients ranged from 16 to 80 years with an average of 43.43 years; 48.8% of the patients were under 40 years of age and the age group (20-39 years) represented 43.4%. The main indications were lower urinary tract symptoms (48.57%) followed by hematuria (19.04%). The main results were bladder neck sclerosis 14 (17.28%) and urethral stricture 13 (16.04%) in men and urinary bilharzia 8 (40%) and bladder tumor 4 (20%) in women. **Conclusion:** Urethroscopy is a primary examination in urology. Lower urinary tract symptoms were the main indication; bladder neck sclerosis in men and urinary bilharzia in women were the main pathologies encountered. This technique should be popularized in urological outpatient surgery.

**Keywords:** Urethroscopy, Indication, Result, Zinvié, Benin.

### INTRODUCTION

Urethroscopy is a basic endoscopic examination in urology. It allows not only exploration of the urethra and bladder, but also the prostate, the sphincters, the neck of the bladder and the ureteral meatus [1]. It is the key to the diagnosis of lower urinary tract pathologies and sometimes allows certain samples to be taken or certain disorders to be treated, so much so that it is often referred to as the urologist's third eye [2].

The main indications include hematuria, recurrent urinary tract infections, lower urinary tract symptoms, follow-up after the presence of abnormal cells in the urine or after treatment for bladder cancer [2,3]. Generally, urethroscopy is often performed in the elderly because of the frequency of age-related lower urinary tract pathologies, but more and more young subjects are resorting to it, raising interest in its indications and the main results obtained [2].

The aim of this study was to describe the indications and results of urethroscopy in the population received in the urology department of the Zinvie La Croix Hospital.

### METHODOLOGY

This was a prospective descriptive study conducted in the urology department of the Zinvie La Croix hospital from January 1st, 2022 to July 30th, 2022.

A total of 92 patients had been collected during the period of our study

Our study included any person over 15 years old, inpatient or outpatient, regardless of sex, admitted during the study period for urethroscopy.

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Urethroscopy was performed using a rigid cystoscope, carriage 24, with a 12 degree optic connected to an endoscopy column control with a saline irrigation stream. The urethroscopy was performed using local anesthesia with 2% Xylocaine viscous gel.

The variables studied were: age, sex, indication for urethroscopy and the results obtained.

**Table 1:** Age distribution

Age group	Number (percentage)
<20 years	5 (5.4%)
21- 40 years	40 (43.4%)
41-60 years	22 (23.9%)
61-80 years	24 (26%)
>80 years	1 (1.1%)
Total	92 (100%)

The 20-39 age group (43.4%) was the most represented, followed by the 60-79 age group (26%).

**Table 2:** Distribution by indication and gender

Indication	Male	Woman	Total
	Number (percentage)	Number (percentage)	Number (percentage)
Haematuria	13 (15.8%)	7 (30.43%)	20 (19.04%)
Acute urine retention	11 (13.41%)	1 (4.34%)	12 (11.14%)
Lower urinary tract symptoms (LUTS)	45 (54.87%)	6 (26.08%)	51 (48.57%)
Bladder mass	4 (4.87%)	4 (17.39%)	8 (7.61%)
Control for Bilharzia	2 (2.43%)	1 (4.34%)	3 (2.85%)
Chronic pelvic pain	3 (3.65%)	1 (4.34%)	4 (3.80%)
other (recurrent UTI, anejaculation, urinary incontinence etc.)	4 (4.87%)	3 (13.04%)	7 (6.66%)
<b>TOTAL</b>	<b>82 (100%)</b>	<b>23 (100%)</b>	<b>105 (100%)</b>

The lower urinary tract symptoms (48.57%) and haematuria (19.04%) were the main indications for cystoscopy.

**Table 3:** Distribution by urethroscopy findings and gender

Urethroscopy results	Male	Woman	Total
	Number (percentage)	Number (percentage)	Number (percentage)
Urinary bilharzia	9 (11.11%)	8 (40%)	17 (16.83%)
Bladder tumor	2 (2.46%)	4 (20%)	6 (5.94%)
Prostatic hypertrophy	8 (9.87%)	0 (0%)	8 (7.92%)
Sclerosis of the cervix (serrated cervix)	14 (17.28%)	0 (0%)	14 (13.86%)
Wrestling bladder	9 (11.11%)	1 (5%)	10 (9.90%)
Urethral stenosis	13 (16.04%)	0 (0%)	13 (12.87%)
Bladder lithiasis	7 (8%)	0 (0%)	7 (6.93%)
Cystitis	3 (3.70%)	2 (10%)	5 (4.93%)
Sclerosis of the prostatic compartment	2 (2.46%)	0 (0%)	2 (1.98%)
Cystocele	0 (0%)	1 (5%)	1 (0.99%)
Normal urethroscopy	14 (17.28%)	4 (20%)	18 (17.82%)
<b>Total</b>	<b>81 (100%)</b>	<b>20 (100%)</b>	<b>101 (100%)</b>

Urinary bilharzia (16.63%), cervical sclerosis (13.86%) and urethral stricture (12.87%) were the most frequent pathologies found at cystoscopy.

**Table 4** : Distribution by urethrocytostcopy findings and age

	<20 years	21-40 years	41-60 years	61-80 years	Total
Urinary bilharzia	4 (23.52%)	6 (35.29%)	5 (29.41%)	2 (11.76)	17 (100%)
Bladder tumor	1 (16.6%)	3 (50%)	1 (16.6%)	1 (16.6%)	6 (100%)
Prostatic hypertrophy	0 (00%)	1 (12.5%)	2 (25%)	5 (62.5%)	8 (100%)
Cervical sclerosis (serrated cervix)	1 (7.14%)	9 (64.28%)	2 (14.28%)	2 (14.28%)	14 (100%)
Urethral stenosis	0 (00%)	8 (61.53%)	3 (23.07%)	2 (15.38%)	13 (100%)
Bladder lithiasis	0 (00%)	3 (42.85%)	1 (14.28%)	3 (42.85%)	7 (100%)
Cystitis	1 (20%)	2 (40%)	2 (40%)	0 (00%)	5 (100%)
Sclerosis of the prostatic compartment	0 (00%)	0 (00%)	0 (00%)	2 (100%)	2 (100%)
Cystocele	0 (00%)	0 (00%)	1 (100%)	0 (00%)	1 (100%)
Wrestling bladder	1 (10%)	5 (50%)	2 (20%)	2 (20%)	10 (100%)
Normal urethrocytostcopy	3 (16.66%)	9 (50%)	4 (22.22%)	2 (11.11%)	18 (100%)
<b>Total</b>	<b>11 (10.89%)</b>	<b>46 (45.54%)</b>	<b>23 (22.77%)</b>	<b>21 (20.79%)</b>	<b>101 (100%)</b>

The age group between 21-40 is the most frequently received for urethrocytostcopy and cervical sclerosis is the most frequently encountered pathology by age group.

## DISCUSSION

During our study period, we performed 92 urethrocytoscopies in our department. This is enormous in comparison with that of M. Jalloh, in Senegal, who performed 655 cases in 5 years [2], that of NDOUR N.S. et al who performed only 39 cystoscopies in 7 months and that of A. OUTTARA et al in Cotonou where 165 cystoscopies were performed in the space of 3 years [4], the same is true of the study of H. S. Chahal in India who performed 369 cystoscopies in 4 years [5]. This difference can be explained by the fact that our hospital is a faith-based hospital with a social vocation and therefore performs urethrocytostcopy on an outpatient basis and at a lower cost. On the other hand, A. Greenstein et al in Israel had performed 1320 cystoscopies in a space of one year in his study on the evaluation of pain during cystoscopy [6]. This difference can be explained by the accessibility of care in Israel or by certain cultural and religious considerations in Benin, which mean that women and even some men do not consult urologists.

The average age of our respondents was 43.43 years, with a peak between 21-40 years. In the OUTTARA study in Benin, the average age was  $47.29 \pm 16.80$  years [4]. In the study by M.Jalloh in Senegal, the mean age was also 47.44 years and 27.94% of the patients were in the 40-60 years age group [2]. The same is true in the Indian study where the mean age was respectively  $56.52 \pm 14.8$  and  $52.37 \pm 19.4$  years for the 2 study groups [5].

This difference can be explained by a wider indication for cystoscopy at the Zinvie La Croix Hospital including in the young adult population, which allowed us to diagnose other causes of lower urinary tract obstruction specific to this age such as cervical sclerosis (tight cervix).

We noted a male predominance with 78.2% of men against 21.7% of women. On the other hand, in the study of OUATARA, the male sex constituted 54.5% [4], in that of H. S. Chahal in India, males represented respectively 63.6% and 68.7% in the two groups [5] and in that of M. Jalloh in Senegal, males represented 61.7% [2].

In our series, the proportion of women seems to be low compared to that elsewhere. This may be explained by the attitude of women who consult urologists less than men.

The main indication in our study included LUTS (48.57%) followed by haematuria (19.04%). In men, the main indications were lower urinary tract symptoms (LUTS) with 54.87% followed by haematuria 15.8% unlike in women where the main indications included haematuria

(30.43%) followed by lower urinary tract symptoms (LUTS) with 26.08%.

In the study by NDOUR N.S. et al, haematuria was the main indication in both sexes in 77% of cases [3]. This can be explained by the fact that his study was made up of a mainly rural population with frequent exposure to bilharzia.

In the study by PARÉ A, on the management of macroscopic haematuria at the CNHU of Cotonou, the frequency of macroscopic haematuria represented 10.8% of the reason for consultation where cystoscopy was unfortunately indicated in only 2.9% of patients at the time [7]. However, this study shows that haematuria remains among the first causes of indication for cystoscopy or even admission to urology in Cotonou.

In the series of M.Jalloh, carried out in Senegal, haematuria was the most frequent indication 28.13%, followed by lower urinary tract urinary disorders 23.61%. In men, in women, the extension of a cervical tumor was the most frequent indication, followed by haematuria [1]. This distribution is different from ours, especially in men, where LUTS was the main reason for admission for cystoscopy. The same is true for women, where the number of cases of LUTS was equal to that of haematuria. This distribution is linked to several causes, notably cultural and religious, where women find it difficult to consult male urologists, but it may also be linked to lifestyle, especially dietary (excessive intake of stimulants such as tea and coffee, excessive consumption of meat or other foods low in dietary fiber), leading to a tendency towards polyuria and constipation, which can cause bladder-sphincter dysfunction responsible for bladder-neck disease and therefore LUTS [8]. It has been shown that caffeine or theine stimulates the secretion of dopamine, and dopamine acts on the central pathways, and in the periphery on DA receptors and with Adenylcyclase contributes to the formation of cyclic AMP, which has an activating effect on the bladder neck and urethra, or an inhibiting effect on the detrusor, or by post-ganglionic hyperpolarization on the interneuronal relays [8]; This explains the sclerosis of the bladder neck even in young subjects who consume a lot of stimulants such as tea, coffee and excess meat.

The same applies serotonin, whose secretion is stimulated by the consumption of coffee or tea and causes central sensitization of the nociceptors, and peripheral contraction of the bladder dome (5HT1) and an increase in intra-urethral pressure (5HT2), which is responsible for LUTS [8].

Urinary bilharzia (16.83%), cervical sclerosis (13.86%) and urethral stenosis (12.87%) were the most frequently found pathologies. In men, cervical sclerosis (17.28%) and urethral stenosis (16.04%) were the most frequent, and in women, bilharzia (40%) and bladder tumor (20%) were the most frequent.

In Senegal, prostatic hypertrophy (21%) and bladder tumor (19%) were the most frequent in men while in women, bladder tumor (23.8%) and cystopathy lesions (17%) were the most frequent [1]. In other studies, such as those of Ahmed H. Gabr et al. bladder tumors were the most frequently found [9,10].

Lina Begdache from Binghamton University in the USA wrote in "Young people sensitive to meat consumption": the mood of young adults (18-29) depends on the concentration of two neurotransmitters, dopamine and serotonin, which are known to promote a good mood. Regular consumption of meat and the practice of sports help to produce these substances [10]. However, as described above, these substances have an activating effect on the bladder neck and urethra or an inhibiting effect on the detrusor, which leads to frequent sclerosis of the bladder neck and therefore to LUTS in this category of population, coupled with regular tea or coffee consumption [8]. These symptoms can lead to complete bladder retention resulting in repeated uretrovesical catheterization which can lead to urethral stenosis.

## CONCLUSIONS

Urethroscopy is a primary examination in urology. Lower urinary tract symptoms were the main indication; sclerosis of the bladder neck in men and urinary bilharzia in women were the main pathologies encountered. This technique should be popularized in urological outpatient surgery.

## Contributions of the authors

Each of the co-authors read the text beforehand and their orientations and amendments were taken into account in this work.

## Conflicts of interest

None declared.

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## REFERENCES

1. Coulange C. Cystoscopie. Progrès en urologie (Paris). 2010;20(11):822-6.
2. Jalloh M, Niang L, Andjanga-Rapono YE, Ndoye M, Labou I, Gueye SM. Uretrocystoscopie ambulatoire au service d'urologie/Andrologie de l'hôpital General Grand Yoff de Dakar. African Journal of Urology. 2016;22(2):115-20.
3. Seck Ndour N. Urétrocystoscopie ambulatoire en milieu rural. Revue Africaine d'Urologie et d'Andrologie. 2021;2(3):99-103.
4. dJM HODONOU F, GANDAHO I, Pare AK, MAMADOU TT, Ouedraogo S, Hodonou R, Ce AK. Apport de la cystoscopie rigide dans le diagnostic des anomalies et pathologies du bas appareil urinaire à Cotonou. Médecine d'Afrique Noire. 2015;62(6):306.
5. Chahal HS, Sikka S, Kaur S, Mittal V, Aulakh BS, Sharma S. A randomized controlled trial to study the rationale of antibiotic prophylaxis in diagnostic rigid cystoscopy: A relook in the era of antibiotic stewardship. International Journal of Applied and Basic Medical Research. 2021;11(3):171-76.
6. Greenstein A, Greenstein I, Senderovich S, Mabjeesh NJ. Is diagnostic cystoscopy painful? Analysis of 1,320 consecutive procedures. International braz j urol. 2014;40:533-8.
7. Paré A, Avakoudjo J, Hounnasso P, Cissé D, Zango B, Gandaho I, et al. Hématurie macroscopique: aspects épidémiologiques, diagnostiques et thérapeutiques à la clinique universitaire, Rev. CAMES-Série A. 2012;13(2):57-60
8. Jurascheck F. Aspects de la neuropharmacologie du bas appareil urinaire, Ann. Kinésith. 1988;15(7-8):359-64.

9. Gabr AH, Elbadry M, Elsherief A, Tawfik ER. Computed tomography-virtual cystoscopy in the evaluation of a bladder mass: Could it replace standard conventional cystoscopy?. Arab Journal of Urology. 2013;11(4):369-74.
10. Lina Begdache, Fruits, café, biscuits, viande, comment l'alimentation influence notre bonne humeur dans <https://www.femmeactuelle.fr/sante/news-sante/fruits-cafe-biscuits-comment-alimentation-bonne-humeur-2056091> publié Publié le 15/12/2017 à 13h38, mis à jour le 7/05/2020 à 17h38