

# Acute urinary retention: analysis of 500 cases in the urology department of the Conakry teaching hospital in Guinea

## Abstract

**Objective:** To evaluate the epidemiology and clinical aspects of Acute Urinary retention (AUR) and the current practice in its management in Guinea.

**Patients and methods:** This is a retrospective study of 500 cases of AUR in a 3 years period from January 2015 to December 2017).

**Results:** AUR represented 69, 80% (n=500) of the total number of urological emergencies in our department in the study period. The mean age was 60, 6 year (Range 2 months to 95 years). The sex ratio was M.F was 26.72. The main etiologies of urinary retentions were prostatic tumors (68.53%) and urethral strictures (20.64%). Urethral catheterization was the most used bladder drainage method in emergency.

**Conclusion:** Urine retention is the most common urological emergency in our department. Prostatic tumors are the main etiology. Its emergency management is based on bladder drainage.

**Keywords:** acute urine retention, emergency, prostate neoplasm, urethral stricture, bladder drainage

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**Abbreviations:** AUR, acute urinary retention; AIDS, acquired immune deficiency syndrome

## Introduction

Acute Urinary Retention (AUR) is commonly seen in the emergency department, most often in older men with benign prostatic hypertrophy.<sup>1</sup> It is defined as a sudden and painful inability to void voluntarily and presents unique assessment and treatment challenges in the emergency department setting.<sup>1</sup> Painless AUR is rare and is usually associated with CNS pathology. Over 10% of men in their seventh decade will experience AUR over a 5-year period and the risk increases to one in three over 10 years.<sup>2</sup> The condition is distressing to the affected individuals and the clinical examination reveals a tensile pubic mass whose palpation accentuates the urge to urinate. It's a urological emergency, requiring adequate management based on bladder decompression by catheterization and quickly addressing the etiology.<sup>2</sup> The purpose of this study was to highlight the epidemiology and current management practice of AUR in the Urology-Andrology department of the University Hospital of Conakry.

## Material and methods

This retrospective study was approved by the University of Conakry Teaching hospital Ethical Committee. We collected data from all patients who were diagnosed with AUR from clinical history and physical examination from January 2015 to December 2017 in the Urology-Andrology department. The data collected include demographics, clinical history, etiologies and the emergency treatment used. Patients whose medical records were missing were excluded.

## Results

The total number of patients included in our study was five hundred, accounting for 69.80% of urological urgencies managed in

our department in the study period. The mean age of our patients was 60.6 years ranging from 2 months to 95 years. Male patients were the most affected (96.39%) with a sex ratio of 26.72 and 63.73% (n=318) of our patients were over 60 years old. The age distribution is shown in Table 1. Farmers and labor workers were more affected, 46.31% and 20% respectively. In terms of geographical origin, 311 patients (62.32%) came from Conakry the capital, and the remaining 37.68% were referred from rural regions of the country. The causes of acute urine retention were dominated by prostatic tumors, followed by urethral stenosis (Table 2). We didn't find any case of AUR caused by an urinary tract infection. All our patients underwent emergency urinary bladder drainage using a urethral catheter in 69.34% (n=346) of cases and suprapubic cystostomy in 30.66% (n=154) of cases.

**Table 1:** Age distribution of acute urinary retention

Age groups	Number of patients	Percentage (%)
0-19	18	3,40
20-39	56	11,22
40-59	108	21,65
60-79	249	49,91
80-99	69	13,82
Total	500	100

**Table 2:** Etiologies of AUR

Etiologies	Number of patients	Percentage (%)
Prostatic neoplasms and Benign Prostate Hyperplasia	342	68,53
Urethral stricture	103	20,64
Bladder calculus	20	4,01
Neurogenic dysfunctions	18	3,61
Others	17	3,21
Total	500	100

Neurogenic dysfunctions: 15 cases of strokes, 2 cases of Post-operative, and 1 case of AIDS

Others: 4 cases of posterior urethral valves, 3 cases of phimosis, 5 cases of bladder neck sclerosis, 3 cases of blunt abdominal injury, 2 cases of bladder tumors.

## Discussion

Acute urine retention is the most common urological emergency in our study (69.80%). The same observation was made by Fall B et al.<sup>3</sup> in Senegal, where AUR accounts for 53% of urological emergencies. In our countries, it constitutes the main mode of revelation of prostate neoplasms, benign prostatic hyperplasia and urethral stricture. In the low socio-economic setting, the frequent use of traditional medicine, and the taboo that surrounds urogenital diseases leads the majority of these patients to seek medical attention at a later stage when complications have already occurred. In the Western countries, acute urine retention is not the most frequent urological urgency,<sup>3</sup> accounting for only 22% of the reasons for consultation in France, according to the Mondet et al.<sup>4</sup> study. The mean age and the predominance of men at least 60 years old is concordant with previous observations made by Diallo MB et al.,<sup>1</sup> who reported an average age of 58.6 years and a higher frequency of AUR in patients over 60 years of age. In Minnesota, Jacobsen SJ et al.,<sup>5</sup> reported in a study of patients with benign prostatic hyperplasia that the relative risk of first episode RAU increases with age; a 60-year-old man has a 23% chance of having a UAR within 20 years. The socio- professional category in our study (more frequent in farmers and labour worked), is only a reflection of the predominance of these sectors of activity in our country.

While most patients (62.4%) came from Conakry, fewer patients residing in remote areas of Guinea were referred to our ward. This underestimated number underline the lack of basic urological training of health workers in our peripheral health structures and may indicate that AUR is underreported in non-urban areas. The etiology of UAE is essentially dependent on the age and sex of the patient.<sup>2,6</sup> The etiologies are distinguished in two groups, obstructive and neurogenic dysfunctions.<sup>2</sup> The predominance of benign prostatic hyperplasia, carcinoma of the prostate and urethral stricture as a cause of AUR is well documented in the African literature.<sup>3,7,8</sup> The other etiologies were cerebrovascular accidents, post-operative AUR, and one case of AIDS. No postpartum reflex AUR was observed in our serie in contrast to Guiheneuf A<sup>9</sup> findings. The most employed method in relieving retention was urethral catheterization in 69.34% of cases.

Because of its frequent use, this procedure must be taught and practiced according to a well-established protocol with a strict respect of the different stages to lessen the risk of inherent complications like pain, urethral trauma or infection.<sup>10</sup> Fall B et al.,<sup>3</sup> also point out that the relatively long durations of carrying an undwelling urinary catheters required by the whole etiologic surgical treatment is a cause of deterioration of quality of life and the whole economic cost of the management of the condition.<sup>11,12</sup>

## Conclusion

Acute urine retention is the most common urological emergency in our country. It mainly affects the aging man carrying a prostatic tumor. Its emergency management is based on bladder drainage dominated by urethral catheterization.

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None.

## Conflicts of interest

The auhtor declares there is no conflict of interest.

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