

Acute Urinary Retention in the Emergency Department – Full Clinical Guideline

Reference no.:CG-EMD/2024/006

1. Introduction

Acute urinary retention (AUR) is common in men. The incidence increases with age, occurring most frequently in men over age 60¹⁻⁴. It is estimated that over a five-year period, approximately 10 percent of men over the age of 70 and almost one-third of men in their 80s will develop AUR^{1,2,5}.

In contrast, AUR is rare in women⁶. It is estimated that there are three cases of AUR per 100,000 women per year⁷. The female to male incidence rate ratio is 1:13.

The majority of patients (especially males) presenting to the emergency department with AUR will be clinically well with no immediately sinister pathology; they can be safely managed on an out-patient basis with appropriate follow-up. However, a minority of patients will develop AUR secondary to a clinically urgent or life-threatening condition such as sepsis or cauda equine syndrome. It is therefore vital that all patients with AUR are thoroughly assessed to exclude significant underlying problems and that appropriate follow-up or admission is arranged for all patients.

2. Aim and Purpose

To ensure appropriate and thorough assessment of patients with AUR, including the identification of the most appropriate admission destination or the facilitation of timely out-patient follow-up.

To reduce unnecessary admissions when patients are suitable for ambulatory/out-patient management.

3. Definitions, Keywords

AUR – Acute Urinary Retention – The inability to voluntarily pass urine where previously control had existed

Catheter/Catheterisation – In the context of this guideline, this refers to urethral catheterisation using a short-term urinary catheter

4. Management Guideline and Flowchart

Patient Group

Patients with AUR presenting to the emergency department and requiring catheterisation.

Assessment

All patients should be fully assessed to ensure that no potentially sinister condition has led to urinary retention e.g. sepsis, urinary tract infection, cauda equina syndrome.

Assessment should include a full history and examination, consideration of a DRE (e.g. constipation), urinary catheter insertion, urinalysis (even in older patients) and blood tests (particularly renal function, PSA (in men) and inflammatory markers).

Ensure to document the residual urine volume drained. The PSA result will be chased and actioned by the urology team if the patient has appropriate follow-up arranged at the time of emergency department discharge.

Urinalysis adds value even in older patients; if nitrite positive and acute urinary retention without other cause then treatment for infection is likely indicated - see UTI guideline.

Disposition

Female patients seldom present with isolated urinary retention; a high index of suspicion for concurrent disease should prompt admission for virtually all these patients. It may be that medical admission is more appropriate than urology admission depending on the most likely underlying cause for their presentation; discuss this with a senior emergency department doctor in the first instance.

Male patients require early assessment by a urologist to determine timing of catheter removal and any need for surgical intervention - see below.

Daytime

All male patients presenting between **0700** and **1800** who meet the criteria for safe discharge (see below) should be sent to Surgical Same Day Emergency Care (SSDEC) for urology review. The SSDEC coordinator should be informed, and a courtesy call should be made to the Urology SpR on call; inability to contact the Urology SpR should not delay the patient's transfer to SSDEC.

Patients not suitable for safe discharge should be admitted to SAU for Urology review after discussion with the Urology SpR on call.

Out of Hours

If a patient presents outside of these hours, then they should be assessed to see if they meet the criteria for safe discharge (see below). If they do not, and no clinical concern exists other than acute urinary retention, then they should be admitted to SAU after discussion with the Urology SHO on call. If other clinical concerns exist (e.g. acute kidney injury, infection) but Urology admission is felt to be appropriate then they should be discussed with the Urology SpR on call.

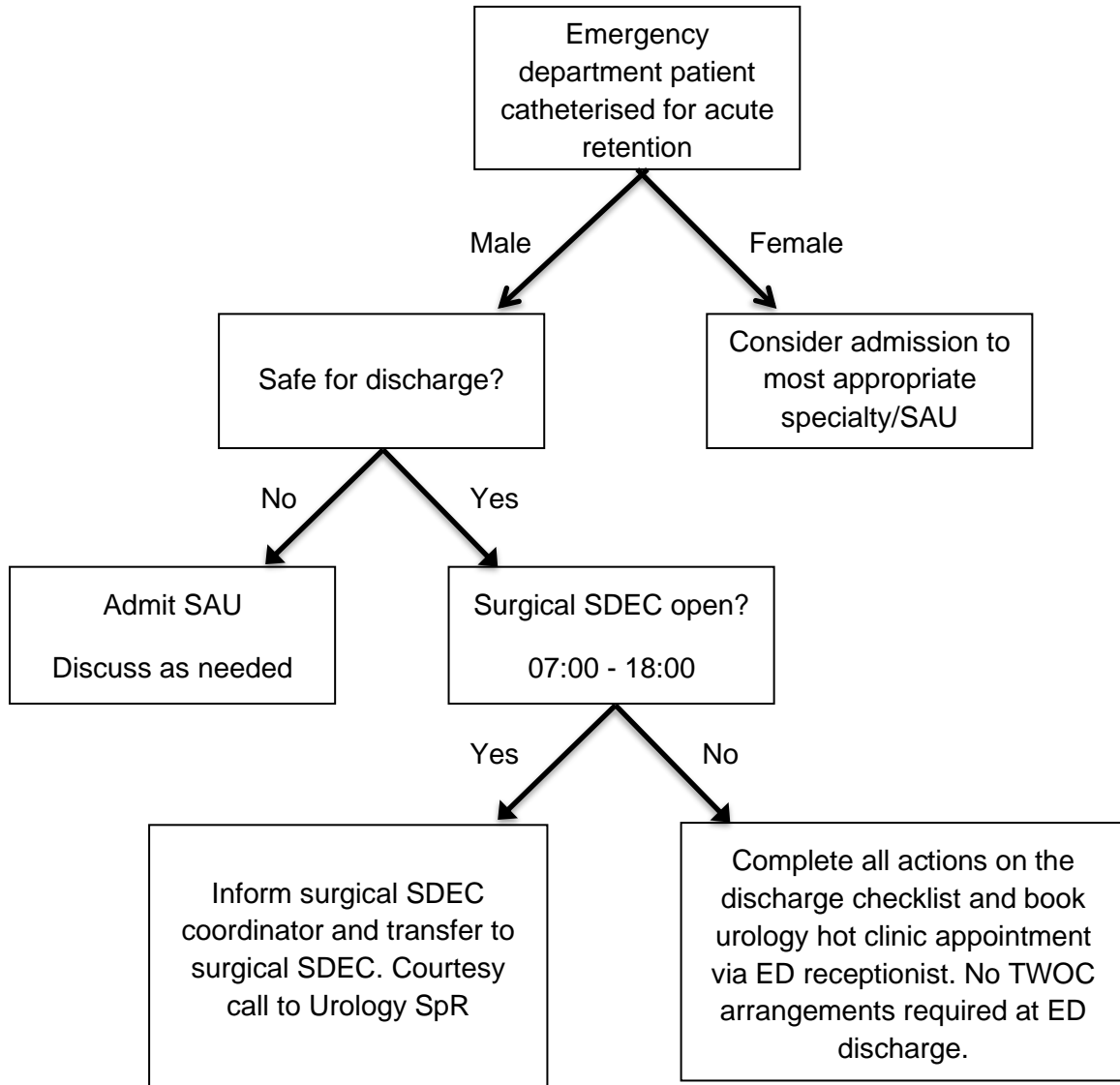
If the patient **DOES** meet the criteria for safe discharge, then the actions on the checklist in Figure 1 should be completed, and they should be booked the next available Urology Hot Clinic appointment by the ED Reception team. These patients do not require discussion with the Urology team.

Please make sure that the patient knows the catheter will NOT be removed at this appointment; they will be reviewed and a plan for further assessment or treatment made as needed. If the catheter is to be removed, then this will take place in the community at a later date. No TWOC arrangements are required at the time of ED discharge.

Factors preventing safe discharge

- Acutely deranged physiological observations
- Underlying condition requiring inpatient admission
- Acutely deranged renal function
- Patient not able to safely manage catheter at home
- Patient not suitable for ambulatory management or needing a chair/bed on their return to hospital

A large residual volume is unlikely to lead to a high volume diuresis unless the patient has acute renal dysfunction; if the patient's renal function is normal (or normal for them), and they have been catheterised without developing haematuria, then they are still appropriate for discharge despite a high residual.



5. References (including any links to NICE Guidance etc.)

1. Fong YK, Milani S, Djavan B. Natural history and clinical predictors of clinical progression in benign prostatic hyperplasia. *Curr Opin Urol* 2005; 15:35.
2. Jacobsen SJ, Jacobson DJ, Girman CJ, et al. Natural history of prostatism: risk factors for acute urinary retention. *J Urol* 1997; 158:481.
3. Murray K, Massey A, Feneley RC. Acute urinary retention--a urodynamic assessment. *Br J Urol* 1984; 56:468.
4. Kaplan SA, Wein AJ, Staskin DR, et al. Urinary retention and post-void residual urine in men: separating truth from tradition. *J Urol* 2008; 180:47.
5. Contemporary Urology. *Urology Times 2005 Fact Book*. Advanstar Medical Economics Healthcare Communications Secondary Research Services 2005.
6. Ramsey S, Palmer M. The management of female urinary retention. *Int Urol Nephrol* 2006; 38:533.
7. Klarskov P, Andersen JT, Asmussen CF, et al. Acute urinary retention in women: a prospective study of 18 consecutive cases. *Scand J Urol Nephrol* 1987; 21:29.

6. Documentation Controls

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7. Appendix 1

See the following page for the “*Acute Urinary Retention in Males – Out-of-hours Ambulatory Follow-up Pathway*”. Print and complete this and include it within the patient’s notes.

