

Clinical Procedure for the Management of Renal Tract Calculi - Renal Colic

For use in:	Wards and A&E
By:	All Medical staff
For:	Junior Doctors / Specialist Nurses / Physician Associates
Division responsible for document:	Surgical Division
Key words:	Stones, calculi, colic
Name of document author:	Melissa Gabriel
Job title of document author:	IST Urology Trainee
Name of document author's Line Manager:	Neil Burgess
Job title of author's Line Manager:	Consultant Urologist
Supported by:	Mr Mark Rochester Urology Service Director/Consultant
Assessed and approved by the:	Clinical Guidelines Assessment Panel (CGAP) If approved by committee or Governance Lead Chair's Action; tick here <input checked="" type="checkbox"/>
Date of approval:	27/07/2020
Ratified by or reported as approved to (if applicable):	Clinical Safety and Effectiveness Sub-Board
To be reviewed before: This document remains current after this date but will be under review	05/02/2023
To be reviewed by:	Neil Burgess
Reference and / or Trust Docs ID No:	16936
Version No:	1.1
Compliance links: <i>(is there any NICE related to guidance)</i>	N/A
If Yes - does the strategy/policy deviate from the recommendations of NICE? If so why?	No

Clinical Procedure for the Management of Renal Tract Calculi - Renal Colic

Version and Document Control:

Version Number	Date of Update	Change Description	Author
1.1	27/07/2020	Additional wording on monitoring compliance	Melissa Gabriel

This is a Controlled Document

Printed copies of this document may not be up to date. Please check the hospital intranet for the latest version and destroy all previous versions.

Objective

To ensure eligible staff safely undertake Management of Renal Tract Calculi - Renal Colic.

Rationale

This document was written to enable staff to follow the correct procedure for Renal Colic according to current agreed evidence based clinical practice in the Urology department.

Presentation

Incidence

The likely incidence in men is 11%, and women 6%. Peaking between 20-50 years.

Risk factors

Risk factors include dehydration, hypertension, gout, hyperparathyroidism, renal anatomical anomalies, diuretics, calcium/vitamin D supplements, chronic metabolic acidosis, cystinuria, low urine citrate, hot climates, higher socioeconomic groups, previous stone disease, inflammatory bowel disease, and short bowel syndrome.

History

Patients presenting with severe colicky loin to groin pain, and may be writhing around in agony. Other symptoms include dysuria, haematuria (although not in all cases), nausea, vomiting, and fevers/rigors.

Investigation

- Standard observations.
- Urinalysis - non-visible haematuria on dipstick.
- Urinalysis - MSU and pregnancy testing in females.

Clinical Procedure for the Management of Renal Tract Calculi - Renal Colic

- Bloods - U+E's, FBC, CRP, urate, calcium and clotting screen if for nephrostomy.
- Blood cultures if the patient is pyrexial $>38^{\circ}\text{C}$, has signs of Systemic Inflammatory Response Syndrome (SIRS) or sepsis.
- Non-contrast CT-KUB (NCCT) should be performed within 14 hours of admission.

Management

Initial

- Analgesia: Non-steroidal anti-inflammatory per rectum e.g. Diclofenac, and/or IV paracetamol supplemented as necessary with an oral opiate or parenteral if vomiting.
- Anti-emetic.
- IV Fluids if unable to maintain sufficient oral intake.
- Patients should not routinely be commenced on Medical Expulsive Therapy (MET).

If a ureteric stone is detected on NCCT the chance of spontaneous passage is:

- $< 5\text{mm} = 68\%$.
- $5\text{mm} = 47\%$.

Initial Management - No Sepsis

Patients with a ureteric calculus should be offered conservative management providing:

- There is no evidence of sepsis.
- Renal function is not acutely impaired.
- The ureteric stone is unilateral.
- There is a normal contralateral renal unit.
- The pain is well controlled with oral and/or per rectum analgesia.
- Adequate pain relief for use at home has been provided.
- An electronic stone Multi Disciplinary Team (MDT) referral (on ICE) has been made.

If a patient requires primary treatment for their ureteric stone this should be undertaken within 48 h of the decision to intervene. Primary treatment options include:

- Shock wave lithotripsy.
- Insertion of a ureteric stent (if there is no access to primary ureteroscopy).
- Primary ureteroscopy.

Initial Management - Sepsis

A patient with sepsis and an obstructing ureteric stone should undergo urgent decompression with a nephrostomy tube or a stent. This should be performed with broad

Clinical Procedure for the Management of Renal Tract Calculi - Renal Colic

spectrum antibiotic cover and undertaken within 12 hours, although in some patients it will need to be performed more urgently.

Follow up

All patients presenting with an acute stone episode need to be referred to the stone MDT with completion of the stone MDT referral form on ICE.

Listing for surgery

If patients are listed for ureteroscopy with a ureteric stent in situ this surgery should be undertaken within four weeks to minimise patient morbidity. Provide these patients with a leaflet explaining stent symptoms and ureteroscopy for stone prior to discharge.

Monitoring compliance

To ensure that this document is compliant with the above standards any adverse outcomes will be entered onto Datix and reviewed by the Departmental Governance Team who will ensure that these are investigated and are discussed at relevant governance meetings to review the results and make recommendations for further action.

Summary of development and consultation process undertaken before registration and dissemination

The authors listed above drafted this document on behalf of the Urology department who have agreed the final content.

This version has been endorsed by the Clinical Guidelines Assessment Panel.

References

No references were applicable.