

Urinary Stones



Acute
Renal
Colic
24 hours
Observation

Most (85%) patients with acute renal colic can be treated on an ambulatory basis (From Home)

MUST

Hospital admission is clearly necessary when any of the following is present:

- Oral analgesics are insufficient to manage the pain.
- Ureteral obstruction from a stone occurs in a solitary or transplanted kidney.
- Ureteral obstruction from a stone occurs in the presence of a urinary tract infection (UTI), fever, sepsis, or pyonephrosis.

Relative indications to consider for a possible admission include

- * Comorbid conditions (eg, diabetes),
- * Dehydration requiring prolonged IV fluids
- * Renal failure Impending or Established
- * Immunocompromised state.
- * Complete obstruction, perinephric urine extravasation
- * Solitary kidney,
- * Pregnancy,

Those with a poor social support system, also should be considered for admission, especially if rapid urologic follow-up is not reliably available.

**About 10 to 15% of patients require
invasive intervention due to**

**Stone size / Shape
Continued obstruction
Infection and Sepsis
Intractable pain
Acute Kidney Injury
Distal Obstruction**

Techniques available to the urologist when the stone fails to pass spontaneously include the following ^[49] :

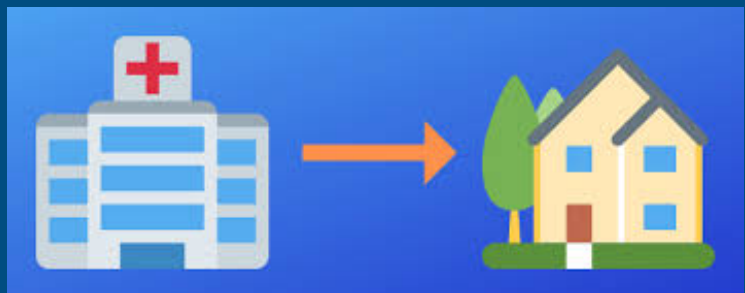
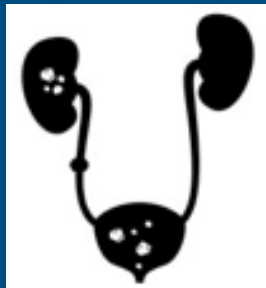
Decompression (Emergency Relief of Obstruction)

- Stent placement
- Percutaneous nephrostomy

Curative Extraction of Stone

- Extracorporeal shockwave lithotripsy (ESWL)
- Ureteroscopy (URS)
- Percutaneous nephrostolithotomy (PNCL) or mini PNCL
- Open / Lap Pyelolithotomy- largely supplanted by less-invasive techniques
- Anatomic nephrolithotomy - Open ,Laparoscopic or Robotic approach

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Approximately 35% of patients present with symptomatic **recurrence** within 3 years of first stone

