



URETERAL STONES

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Diagnosis

- Solitary kidney / Anuria
- Fever

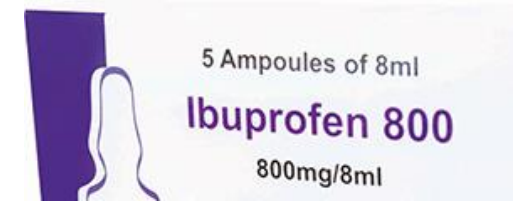
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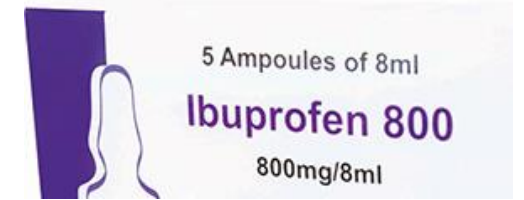
- Solitary kidney / Anuria
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- U/A or U/C?
- Imaging modalities:
 - Sono (first): sens. 45, spec. 94 for ureteral stones
sens. 45, spec. 88 for renal stones
 - KUB: sens. 44, spec. 77 for ureteral stones (only for opacity and follow up IF CT available)
 - NCCT: sens. 93.1, spec. 96.6 for ureteral stones, sens. 100% for calculi > 3 mm
 - X-ray concern: Low dose

Management of Renal Colic



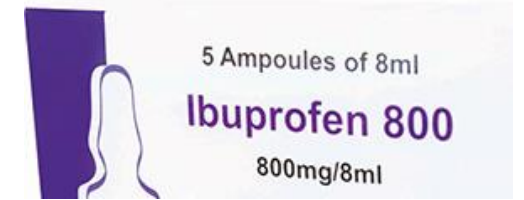
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 - (caution: Coronary events, contraindication: Diclofenac in IHD, CHF, CVD, vascular disease)
- Paracetamol (Acetaminophen)

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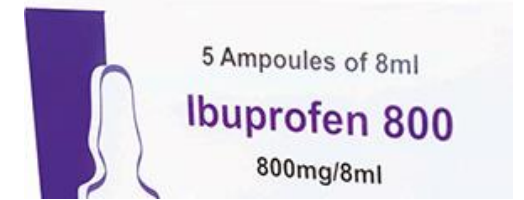
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- Antispasmodics: NO
- Lidocaine IV injection??

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- Acupuncture?

Preventing Recurrent Renal Colic

- NSAIDS (pills / supp)
 - Diclofenac and renal function

Preventing Recurrent Renal Colic

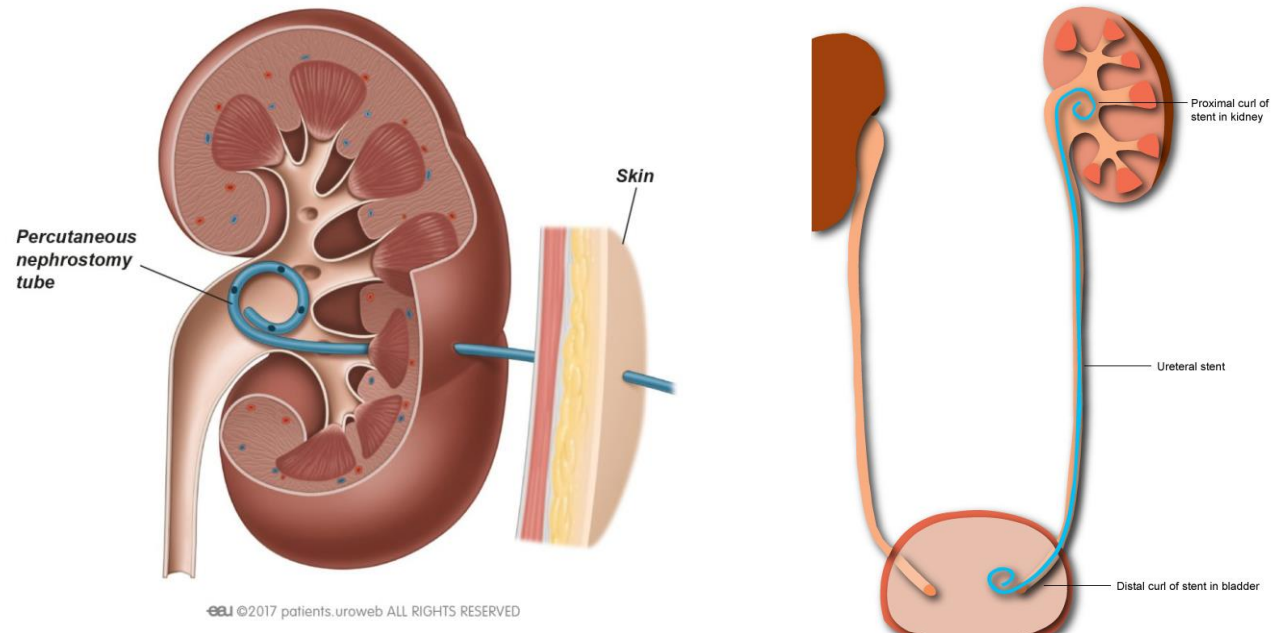
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- MET and pain recurrence prevention

Preventing Recurrent Renal Colic

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 - Diclofenac and renal function
- MET and pain recurrence prevention
- Resistant pain: no recovery with ORAL medication:
 - Drainage (Stenting / PCN)
 - Stone removal

Concomitant UTI

- Stent or PCN?
- Timing of STONE removal



Medical Expulsive Therapy

- **Only in informed patients**
- **α -blockers**
- **calcium-channel inhibitors (nifedipine)**
- **phosphodiesterase type 5 inhibitors (PDEI-5) (tadalafil)**

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- **Steroids?**

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Recommendation	Strength rating
Offer α -blockers as medical expulsive therapy as one of the treatment options for (distal) ureteral stones > 5 mm.	Strong

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- Flexible

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- Antegrade ureteroscopy / laparoscopy (in upper, > 15 mm, impaction)
- Stenting and retrieval
- Intracorporeal lithotripsy (Holmium YAG laser versus pneumatic and US)
- Stenting (ureteral trauma, residual fragments, bleeding, perforation, UTIs, or pregnancy)

Complications of URS

- Overall: 9 – 25%
- Mostly minor, not necessitating intervention
- Ureteral avulsion and strictures are rare (< 1%)
- Previous perforations are the most important risk factor for complications

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- How long to wait with MET
- How large is large?
- SWL Vs URS? (regarding overall stone free rate, faster results, complications, obese and morbid obese)

Proximal Ureteral Stone



Distal Ureteral Stone



Thank you

