**RENAL CALCULI PATHWAY**

**INPATIENT**

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**On admission, place the following orders:**
- Consult Urology, if not already done
- Maintenance IV fluids
- Pain Management for all severity of pain levels: (NSAIDs recommended first line to reduce renal colic)
  - First line: PO acetaminophen PRN and IV ketorolac PRN (PO ibuprofen alternative)
  - Second line: IV morphine PRN
- Anti-emetic: ondansetron
- Labs (if not already completed or 1st set abnormal)
  - CBC
  - Chem 8 (BMP)
  - Blood culture (fever or concern for sepsis)
- Accurate I&O
- Strain Urine
- Nursing to order urine strainer from Capsure: #100630 – use with each urination
  - If stone is retrieved, send for calculi (stone) analysis

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**Inclusion**
- ≥ 1 year old
- Symptomatic/Chief complaint UTI, flank pain, nausea or vomiting AND
  - High suspicion of renal calculi

**Exclusion**
- < 1 year old
- Low suspicion of renal calculi
- Concern for septic shock

**Clinical Predictors for Renal Calculi**
- Personal history of renal calculi
- > 5 RBC per HPF on microscopic urinalysis
- History of nausea/vomiting
- Flank pain on physical exam

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**Notify Urology Manage off pathway**

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**Is patient ≥ 2 years AND has ureteral calculus?**

**Was UA concerning for UTI?**

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**Is patient having any of the following symptoms?**
- Worsening back, flank, or abdominal pain
- Increased difficult to urinate or anuria
- Fever

**Discharge Criteria**
- Pain well managed
- Tolerating PO intake
- No fever for 24 hours

**Discharge with the following instructions:**
- Anti-emetics and pain medications
- Tamsulosin 0.4 mg Daily (only pts ≥ 2 yrs + if ureteral calculus)
- Antibiotics if needed (refer to UTI (febrile) pathway)
- Return to Urology clinic (2-4 weeks) for obstructing ureteral stone
- Send home with strainer if stone not passed (Capsure #100630)
- Education: Kidney Stone signs & symptoms, indications to return to ED

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**Disclaimer:** Pathways are intended as a guide for practitioners and do not indicate an exclusive course of treatment nor serve as a standard of medical care. These pathways should be adapted by medical providers, when indicated, based on their professional judgement and taking into account individual patient and family circumstances.

*ChildrensOmaha.org/Pathways* Updated 01/2023
**Dosing Guidelines**

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<tr>
<th>Medication</th>
<th>Dosage Details</th>
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| Ketorolac (Toradol) IV | - 0.5 mg/kg/dose Q6H for 3-5 days  
                   | - <50 kg max 15 mg/dose  
                   | - ≥ 50 kg max 30 mg/dose |
| Morphine IV          | - 0.05-0.1 mg/kg/dose                               |
| Tamsulosin PO        | - 0.4 mg daily (only pts ≥ 2 yrs + ureteral calculus) |
| Ondansetron PO       | - 8-15 kg = 2 mg  
                   | - 15-30 = 4 mg  
                   | - >30 kg = 8 mg |
| Ondansetron IV       | - 0.15 mg/kg/dose; max 4 mg                         |