



Renal Calculi

Adult Medical

Austin County
EMS Protocol & Guideline

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Overview: Renal Calculi; commonly referred to as Kidney Stones, are the build-up of crystal and calcium deposits composed of dietary minerals. They are classified by their location and usually become lodged in the ureter, bladder, or along the urinary tract causing extreme pain, nausea and vomiting. Generally, Kidney Stones affect the male population ranging between the ages of 30 and 45 years old.

EMT

- Airway/Oxygen appropriate for condition

AEMT

- Establish IV of Normal Saline
- **Ondansetron** 4mg IV – May repeat once
- **Diphenhydramine** 12.5-25mg IV – 25-50 IM, **Max** dose 50mg - Use half dose in elderly patients

Paramedic

Mild to Moderate Pain

- **Ketorolac** 15-30mg IV or 30-60mg IM – **PREFERED** Treatment for Renal Calculi

Moderate to Severe Pain

- **Morphine** 2-10 mg IV/IO; repeat PRN: Max dose of 20 mg
- **Fentanyl** 1-2 mcg/kg IV/IO/IN; repeat PRN: Max total dose 400 mcg

Severe Pain

- **Ketamine** 0.1-0.25 mg/kg IV/IO **OR** 0.5 -1 mg/kg IM/IN: may repeat every 10 minutes as needed

Pearls

Patients suffering from Renal Calculi will usually be able to tell you if they have a history of kidney stones and will present with distinct flank pain radiating to the groin with associated hematuria or the inability to urinate. If not contraindicated, administering a bolus of IV fluids will aid these patients in passing the kidney stone.