

# Renal Colic

Raed Almannie  
Head of Urology  
KSUMC



# Case

- A 24-year-old male presented with left flank pain for 2 days.

- Next?



# History

- Pain
- Urinary symptoms
- Eliminate differential diagnosis



# Physical Examination

- General examination
- Abdominal examination



# Differential Diagnosis

- Radiculitis ( pseudo-renal)
- Leaking abdominal aortic aneurysms
- Pneumonia
- Myocardial infarction
- Ovarian pathology (e.g., twisted ovarian cyst)
- Acute appendicitis
- Testicular torsion
- Inflammatory bowel disease (Crohn's, ulcerative colitis)
- Diverticulitis
- Ectopic pregnancy
- Burst peptic ulcer
- Bowel obstruction

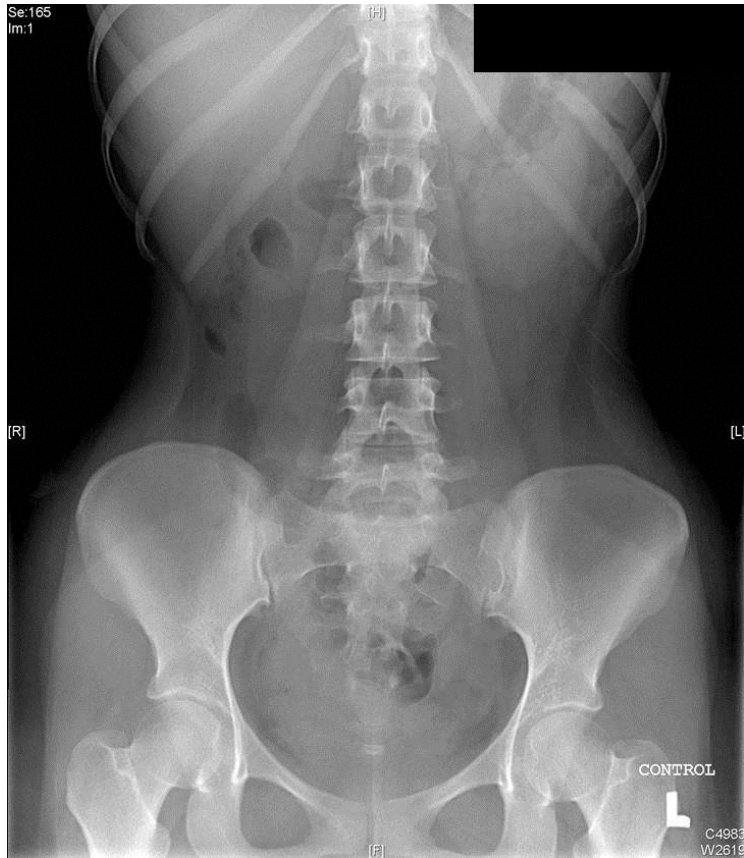
# Case

- A 24-year-old male presented with left flank pain for 2 days.
  - Pain radiating to groin. No aggravating or relieving factors. Sudden. 10/10.
  - No urinary symptoms
  - Not related to movement
  - No GI symptoms
  - No fever
  - Physical examination revealed left flank tenderness
- 
- Next?

# Investigations

- CBC
- Renal profile
- Urine analysis
- Imaging (which one)

# KUB





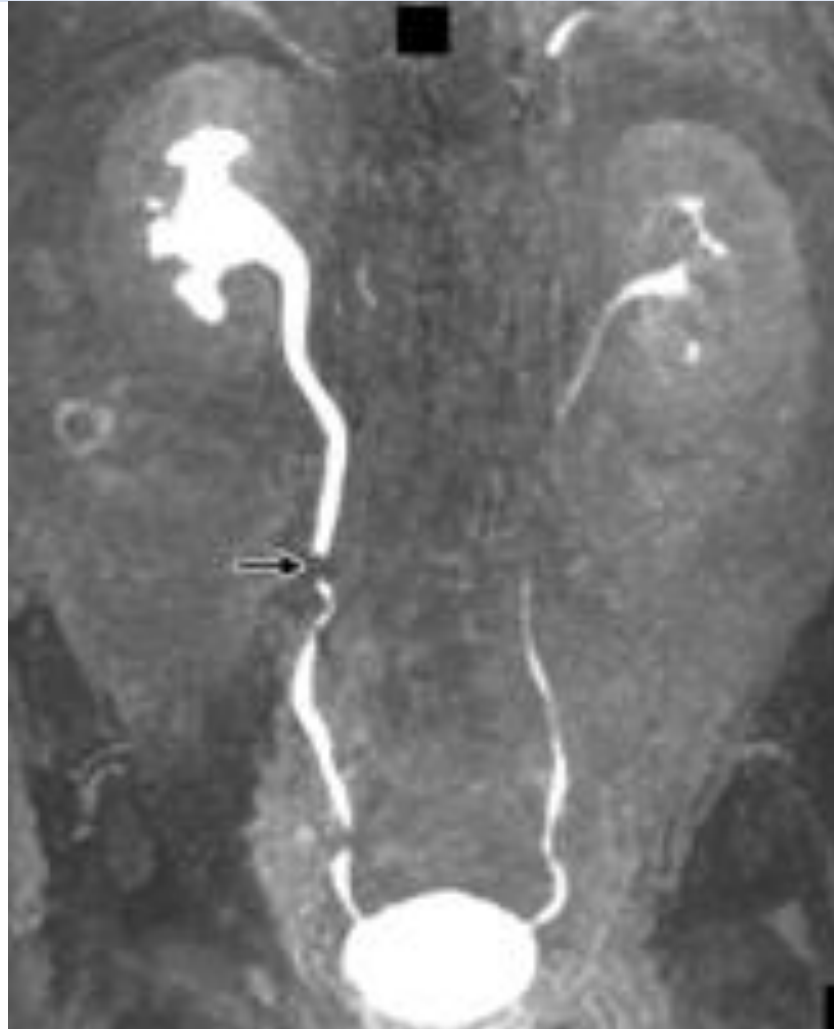
US



# IVU



# MRU



# Gold Standard

- CT without contrast



- Next?



# Treatment

- Hydration
- Analgesia
- Medical expulsion therapy
- When do you admit/intervene?

# Indications

- Infection
- Renal impairment
- Persistent nausea and vomiting
- Persistent pain not responding to oral analgesia
- Failure of medical therapy

# Case

- Same patient presented with fever and increase left flank pain
  - CBC:                      Elevated WBC
  - Renal profile :        Normal
  - CT:                        Same
- 
- Next?

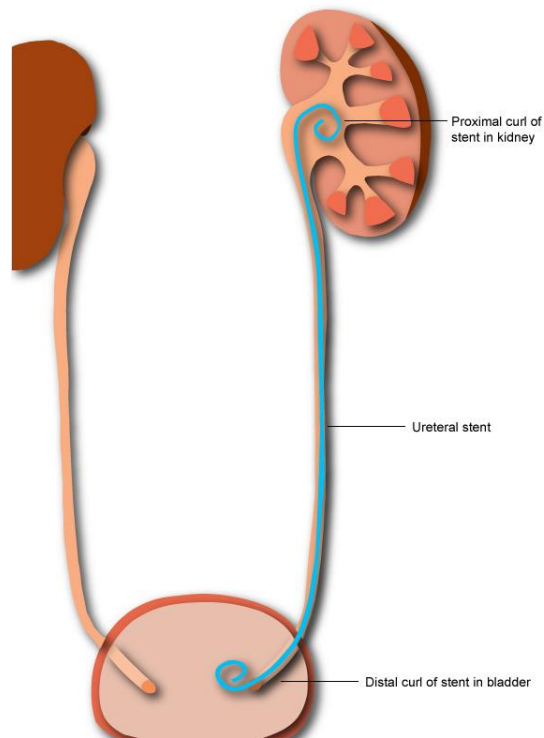
# Treatment

- Hydration
- Analgesia
- UA and C/S and blood C/S
- Broad spectrum antibiotics
- Urine diversion

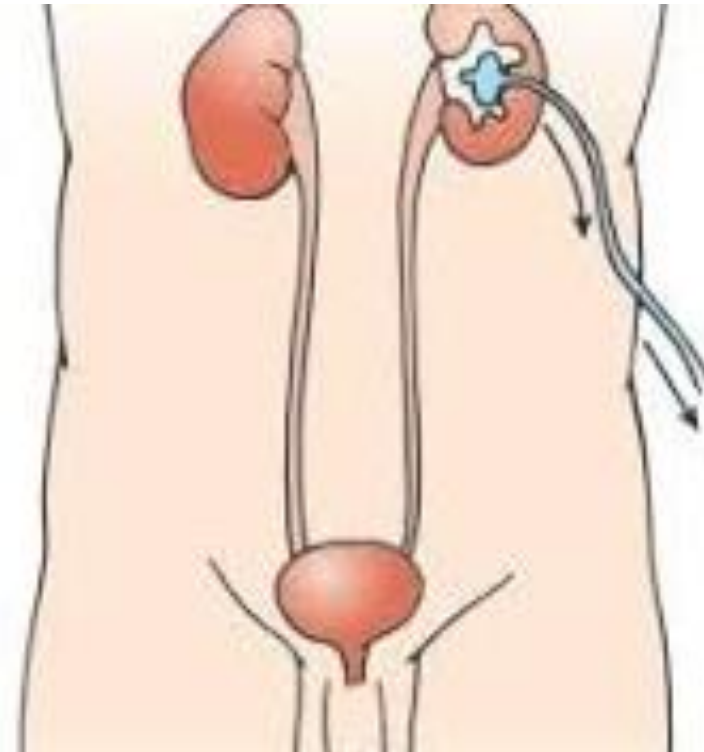


# Urine diversion

- DJ stent



- Nephrostomy



# Why?

- Antibiotic levels are low with obstruction



- Sepsis if definitive therapy



# Case

- Same patient presented with fever and increase left flank pain
  - CBC:                      Elevated WBC
  - Renal profile :        Normal
  - CT:                        Same
  - Underwent DJ insertion and 2 weeks later urine culture was negative.
- 
- Next?

# Indications

- Infection
- Renal impairment
- Persistent nausea and vomiting
- Persistent pain not responding to oral hydration
- Failure of medical therapy

# Indications

- Infection

- Renal impairment
- Persistent nausea and vomiting
- Persistent pain not responding to oral hydration
- Failure of medical therapy

# Definitive Treatment



# ESWL

- <https://www.youtube.com/watch?v=0hKRYVrIfdI>

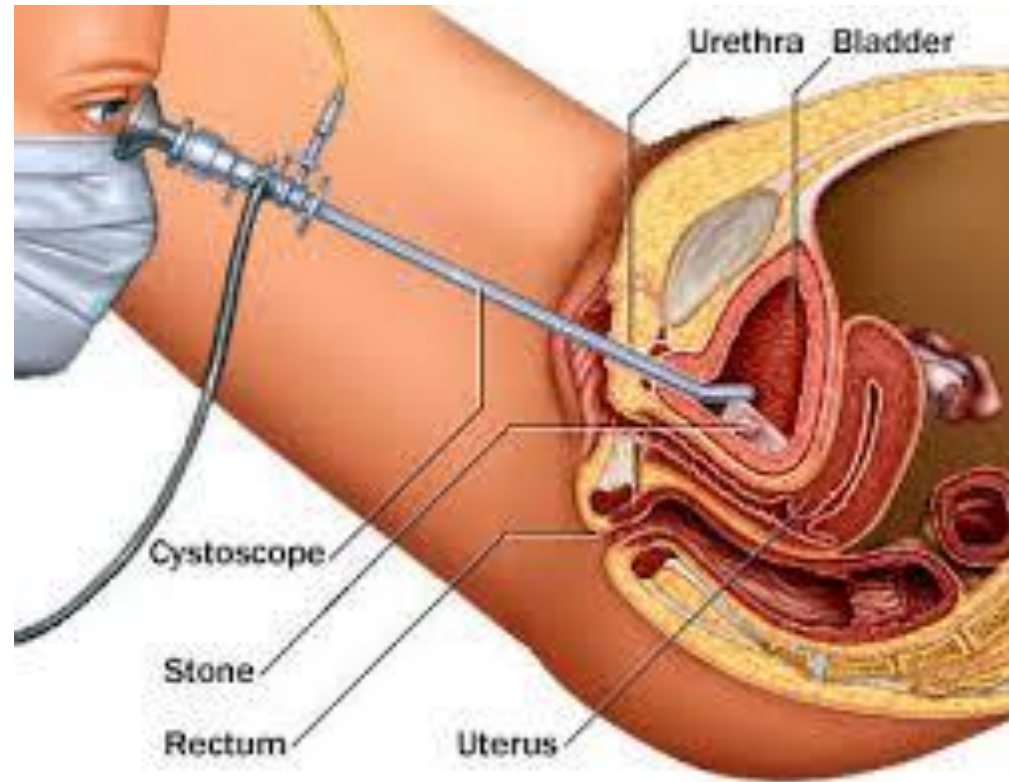
# URS

- <https://www.youtube.com/watch?v=ayCH5cc0y1M>



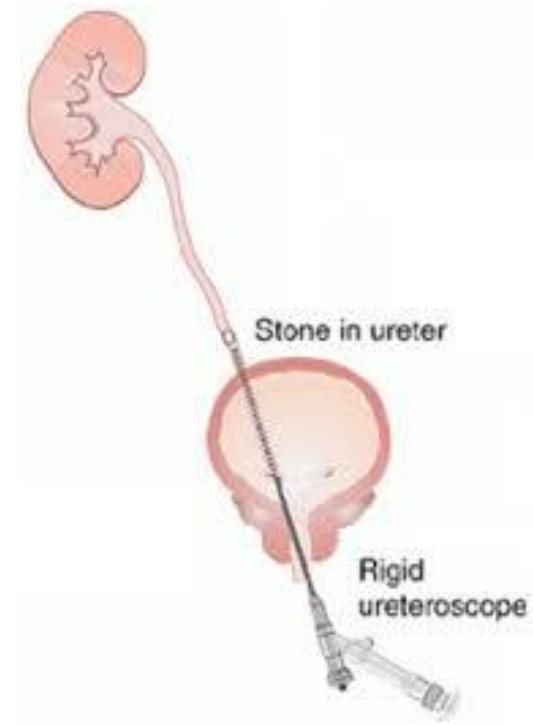
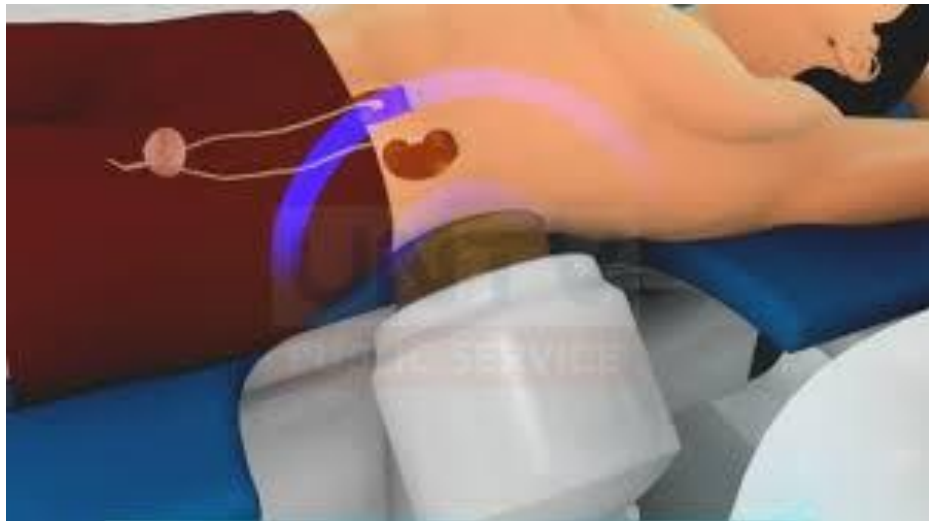
# Bladder stone

- Cystolitholapaxy



# Ureteric stone

- Mid and lower ureter: Ureteroscopy > ESWL
- Upper ureter:
  - > 1cm : Ureteroscopy > ESWL
  - <1cm : Ureteroscopy or ESWL



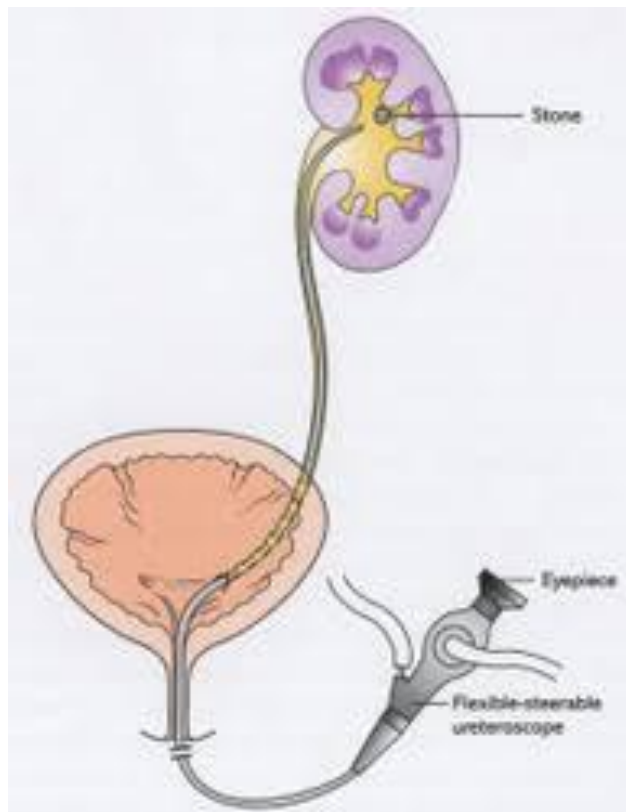
# Renal stone

- > 2 cm : PCNL



# Renal stone

- < 2 cm : URS Vs ESWL



QUESTIONS