

BROWN EMERGENCY MEDICINE CDU
PYELONEPHRITIS TREATMENT PATHWAY

Purpose: To safely manage and disposition patients diagnosed with pyelonephritis who require further observation and medical management.

Admission Eligibility Criteria:

- Clinical diagnosis of pyelonephritis

Exclusion Criteria:

- **Vital Signs:**
 - Heart Rate >110
 - Systolic Blood Pressure <90 mmHg
 - Pulse Oximetry < 95%
 - Respiratory Failure (pH<7.3, BIPAP in the ED, RR>35)
- Altered mental status
- Severe Sepsis or Septic Shock
- Lactate > 2 mmol/L (not required for CDU placement, unless pt meets sepsis criteria)
- **High risk comorbidities:**
 - Immunocompromised status – active chemotherapy plan, HIV, sickle cell disease, cirrhosis, asplenia, autoimmune disease or chronic illness requiring immunosuppressive medications
 - Neurologic dysfunction (MS, paraplegia)
 - Presence of a known drug resistant organism
- **Known Structural or Functional Renal abnormalities (imaging not required prior to Observation, unless clinically indicated):**
 - Renal or perinephric abscess
 - Suspected/confirmed comorbid ureterolithiasis
 - Mechanical obstruction
 - Single kidney, Polycystic kidney disease, renal transplant
 - Acute renal insufficiency
 - Indwelling catheter, stent, nephrostomy tube, or recent GU procedure/manipulation.
- Prior urine culture data with MDRO sensitive only to IV antibiotics
- Concurrent medical problem requiring admission
- Any condition found on the “CDU Universal Exclusion Criteria” list
- Requiring more assistance for ADLs than the CDU is capable of safely providing (one assist/patient for units with 5:1 maximum staff:patient ratio and no assists for units with >5:1 maximum staff:patient ratio)
- Unlikely discharge within 48 hrs. (ED attending discretion)

* Reviewed January 2016 with Infectious Disease, RIH

Last Update: 12/18/22, EEG

PYELONEPHRITIS MANAGEMENT PATHWAY¹:

Pre-observation unit evaluation should include:

1. CBC
2. Chem 7
3. Urinalysis
4. Urine culture (obtain prior to antibiotics)
5. UHCG (if indicated)
6. Lactate (if indicated)

Observation Unit interventions may include:

1. Serial vital signs
2. Antibiotics (assuming normal renal function)
 - a. If gram stain is positive, tailor antibiotics toward likely pathogens
 - b. If patient has prior positive urine cultures, tailor antibiotics toward likely pathogens
 - c. Otherwise choose:
 - i. Ceftriaxone 1-2 g IV q24hrs
 - ii. Ciprofloxacin 400mg IV q12hrs
 - iii. Levofloxacin 750 mg IV daily
3. IV hydration, if indicated
4. Analgesics
5. Antipyretics
6. Antiemetics

Indications for hospital admission while under ED observation:

1. Newly and persistently abnormal vital signs
2. Clinical deterioration
3. Inability to be discharged within 24 hours

Discharge Planning:

1. Resolution or improvement of systemic symptoms
2. Tolerate PO
3. Adequate pain control on PO analgesics
4. Primary Care follow-up appointment within 14 days
5. Prescription to complete course of antibiotics.
 - a. Tailor antibiotic choice to culture data when available
 - b. If no culture data:
 - i. Cephalexin 500 mg every 6 hours for 14 days
 1. If allergic, consider Bactrim 1 DS tablet PO twice daily for 7 days
 - ii. Or Ciprofloxacin 500 mg twice daily for 7 days

¹ Reviewed January 2016 with Infectious Diseases and February 2016 by Pharmacy and Therapeutics Committee