



UROSEPSIS & CAUTI

Sepsis from the urinary tract · drain the obstruction

DRAIN

& cover

MANAGEMENT PATHWAY



OBSTRUCTED + INFECTED = EMERGENCY: urgent decompression (ureteric stent / percutaneous nephrostomy). Antibiotics ALONE fail an obstructed system. Drain abscess / pyonephrosis.

EMPIRIC THERAPY

remove or replace the catheter

Setting	Regimen & dose	Note
Standard	Ceftriaxone 2 g q24h OR pip-tazo 4.5 g q6-8h	Covers E. coli, Klebsiella
ESBL risk	Meropenem 1 g q8h OR ertapenem 1 g q24h	Prior ESBL, recent antibiotics, care home
Gram-positive risk	Add vancomycin (Enterococcus / staph)	Stones, instrumentation, healthcare-associated

MONITOR RESPONSE

de-escalate on culture

- Fever, WCC, haemodynamics; urine output
- Narrow on urine + blood culture sensitivities
- 7 days if prompt response; 10-14 if bacteraemic / slow
- Do NOT treat asymptomatic bacteriuria

NOT IMPROVING?

- **Undrained obstruction** - urgent stent / nephrostomy - re-image
- **Renal / perinephric abscess** - CT; percutaneous drainage
- **ESBL / resistant** - escalate to a carbapenem
- **Catheter not changed** - biofilm - remove or replace it

Definitions: CAUTI = catheter ≥ 48 h + symptoms + significant bacteriuria. Likely bugs: E. coli, Klebsiella, Proteus, Pseudomonas, Enterococcus. ESBL is common in urinary isolates.

DRAINAGE & SPECIAL SITUATIONS: obstructing stone → ureteric stent or percutaneous nephrostomy · perinephric / renal abscess → percutaneous drainage · emphysematous pyelonephritis → urgent urology (often nephrectomy) · candiduria → treat only if symptomatic / neutropenic / instrumented.

PEARLS & PITFALLS

- An obstructed infected kidney needs urgent drainage - antibiotics alone will not clear it.
- Remove or replace the catheter before treating; biofilm keeps the infection going.
- Do not treat asymptomatic bacteriuria - it drives resistance without benefit.
- Not improving? Re-image for obstruction or abscess before escalating antibiotics.

References: IDSA CAUTI 2009 · EAU Urological Infections 2024 · Surviving Sepsis 2021 · local antibiogram.

Educational aid; verify doses against local protocol and patient factors.

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