

Peritoneal Dialysis– Associated Peritonitis

Practical management • Adult patients

01 RECOGNISE & SAMPLE

Cloudy effluent ± abdominal pain: suspect peritonitis. Collect effluent for cell count, differential and culture before antibiotics; use blood-culture bottles. Examine the exit site and tunnel, and assess for sepsis. Start treatment promptly after sampling.

02 START EMPIRICAL TREATMENT

Cover Gram-positive and Gram-negative bacteria: cefazolin + ceftazidime IP, or vancomycin + ceftazidime IP when resistant staphylococci are a concern. Cefepime monotherapy is an alternative under the local protocol. Tailor treatment to cultures.

03 ADMINISTER INTRAPERITONEALLY

Intraperitoneal administration is preferred: aseptically add the antibiotic through the medication port into a fresh dialysis-fluid bag, then instil it through the PD catheter. Check compatibility; do not mix antibiotics in the same syringe.

1. Give antibiotics either intermittently in one daily exchange, usually with a dwell of at least 6 hours, or continuously in every exchange after a loading dose.

EXAMPLE IP DOSES • INTERMITTENT, LONG DWELL

Cefazolin 15 mg/kg daily | Ceftazidime 1–1.5 g daily
Vancomycin (CAPD) 15–30 mg/kg; re-dose by serum levels, often every 5–7 days.
Adjust for APD, residual kidney function and the local protocol.

04 REVIEW & ESCALATE

Sepsis: hospital admission and prompt IV antibiotics. Monitor symptoms and effluent cell count. Treat for 14–21 days according to the organism; provide antifungal prophylaxis. Fungal peritonitis: prompt catheter removal. Refractory infection: assess for removal.

REFERENCES

Li PK-T et al. Perit Dial Int. 2022;42:110–153. doi:10.1177/08968608221080586.
Lichodziejewska-Niemierko M et al. Nefrol Dial Pol. 2019;23:72–78.