A Practical Reference Guide for 2023 Updates to the ISPD Catheter-Related Infection Recommendations[1]

PDACADEMY

DEFINITIONS

Types of catheter-related infections

Exit Site Infection (ESI)

- Presence of purulent discharge, ± erythema of the skin at the catheter epidermal interface

Tunnel Infection

- Presence of clinical inflammation (erythema, swelling, tenderness or induration) ± ultrasonographic evidence of a fluid collection anywhere along the catheter tunnel

Peritoneal dialysis (PD) catheter insertion-related exit site and/or tunnel infection

An episode of infection that occurs within 30 days of PD catheter insertion

Cause-specific catheter-related infection

- Classify ESI based on identified organism
- **Culture-negative ESI:** When ESI is diagnosed, but no organism is identified on culture of the exit site swab

Outcome-specific definitions of catheter-related infection

Refractory catheter-related infection: Failure to respond after 2 weeks of effective antibiotic therapy and appropriately intensified exit site care, or 3 weeks for *Pseudomonas* spp. infection

Infection-related catheter removal: Catheter removal owing to catheter-related infection that is not responding to appropriate antibiotic therapy or surgical salvage procedures

MONITORING AND REPORTING

1. Monitor incidence of catheter-related infection at least annually
2. Report rate of catheter-related infection as **number of episodes/year at risk**
3. Report ESI and tunnel infection rates separately as number of episodes/year
4. Overall ESI rate should be **≤0.40 episodes/year at risk**
5. Proportion of PD catheter insertion-related infection within 30 days of PD catheter insertion should be **<5% of all catheters inserted**

Management of Catheter-related Infections

PREVENTION OF CATHETER-RELATED INFECTION

Administer **prophylactic antibiotics** immediately before insertion

Consider **shared decision-making** between clinician and patient in the choice of PD catheter placement technique

Administer **nasal antibiotic prophylaxis** if patient is identified as a nasal *Staphylococcus aureus* carrier on pre-catheter insertion screening

Leave exit site dressing intact for **7 days** after PD catheter insertion unless soiled

Exit Site Care

Daily topical application of **antibiotic cream or ointment** (mupirocin or gentamicin)

Cleanse exit site ≥2 times/week and every time after a shower or vigorous exercise

Continue PD catheter exit site care **as long as the catheter remains in place**

Immobilise PD catheter to avoid traction injury at the exit site

Dressing over the exit site is **not mandatory** after exit site care and topical antibiotic application

TREATMENT OF CATHETER-RELATED INFECTION

Antibiotic treatment

Exit Site Infection

Administer oral antibiotic treatment* and adjust antibiotics and duration according to clinical response, swab culture and *in vitro* susceptibility

Shorten standard **14-day antibiotic treatment course** to **7–10 days' duration** if resolution of infection is confirmed by evaluation at ~1 week

For ESI caused by ***Pseudomonas* species**, treat with **≥3 weeks** of effective antibiotics

Tunnel Infection

Treat tunnel infection with **≥3 weeks** of effective antibiotics

Scan the QR code for complete treatment guidelines

New Salvage Options

Consider a **surgical salvage** procedure as an alternative to simultaneous catheter replacement in selected patients

Consider **cuff removal or shaving** in PD patients with external cuff extrusion and ESI refractory to antibiotics

Consider **exit site relocation** in patients with ESI refractory to antibiotics

*PD patients are recommended to receive concomitant antifungal prophylaxis.

For Healthcare Professionals Use Only

References

1. Chow KM, Li PK, Cho Y, *et al. Perit Dial Int.* ISPD Catheter-related Infection Recommendations: 2023 Update. 2023;43(3):201-219.

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