

## 4. Indications for the removal of peritoneal dialysis catheters

*Date written:* February 2003

*Final submission:* June 2004

### Guidelines

No recommendations possible based on Level I or II evidence

### Suggestions for clinical care

(Suggestions are based on Level III and IV evidence)

- Removal of a PD catheter should be considered in those situations which investigators have previously anecdotally reported the removal of PD catheters. These include obstruction to flow, dislodgement, leakage, adjacent herniation, associated infection that fails to respond to antibiotics (including peritonitis, tunnel infection, and exit site infection), spontaneous cuff extrusion, accidental shortening, and discontinuation of PD (including after recovery of renal function, transfer to haemodialysis or renal transplantation). (Level IV evidence)

### Background

The catheters that patients use to receive peritoneal dialysis (PD) require removal from time to time. The purpose of this guideline is to define the circumstances under which the removal of a PD catheter is justified.

### Search strategy

Databases searched:

**1) PD and Catheter Removal:** MeSH terms and text words for peritoneal dialysis were combined using “and” with MeSH terms and text words for catheters as well as with MeSH terms and text words for peritonitis. These were then combined using “and” with MeSH terms and text words for prognostic studies. Then finally these were combined using “and” with MeSH terms and text words for removal. The search was carried out in Medline (1966 – October Week 5 2002). The Cochrane Renal Group Trials Register was also searched for trials not indexed in Medline.

**2) PD and Catheter Replacement:** MeSH terms and text words for peritoneal dialysis were combined using “and” with MeSH terms and text words for catheters as well as with MeSH terms and text words for peritonitis. These were then combined using “and” with MeSH terms and text words for prognostic studies. Then finally these were combined using “and” with MeSH terms and text words for replacement. The search was carried out in Medline (1966 – October Week 5 2002). The

Cochrane Renal Group Trials Register was also searched for trials not indexed in Medline.

**Date of searches:** 26 November 2002.

## **What is the evidence?**

No properly conducted randomised controlled trials appear to have been performed that address this issue.

## **Summary of the evidence**

Not possible.

## **What do the other guidelines say?**

**Kidney Disease Outcomes Quality Initiative:** No recommendation.

**British Renal Association:** No recommendation.

**Canadian Society of Nephrology:** No recommendation.

**European Best Practice Guidelines:** Guideline 3.11 states: Catheter removal for exit-site infection should be considered when: (1) a peritonitis episode with the same micro-organism is present, (2) unsuccessful antibiotic treatment, (3) recurrent exit site infections (Evidence C: Opinion).

**International Guidelines:** Adults: In patients with multiple gram-negative microorganisms, a high relapse rate is common even with adequate antibiotic therapy. Therefore, even in episodes with initial clinical improvement, removal of the catheter should be considered.

If no clinical response is noted after 96 hours of therapy for relapsing peritonitis, catheter removal is indicated. If the patient responds clinically, but subsequently relapses an additional time, catheter removal and replacement are recommended (Keane et al 2000).

Pediatric patients: Guideline 12: Peritoneal dialysis catheter removal should occur as part of the recommended treatment course in situations in which failure to do so is unlikely to result in successful peritonitis therapy. The timing of catheter replacement should be 2-3 weeks following catheter removal in most cases (Warady et al 2000).

## **Implementation and audit**

Not possible.

## **Suggestions for future research**

A prospective multicentre trial could investigate catheter removal after various courses of antibiotics for various types of PD-associated infection.

**OUT OF DATE**

## **References**

Keane WF, Bailie GR, Boeschoten E et al. 2000. ISPD Guidelines / Recommendations: Adult peritoneal dialysis-related peritonitis treatment recommendations: 2000 update. *Perit Dial Int* 20: 396-411.

Krediet R, Dombros N, Dratwa M et al. 2002. European guidelines on best practice for the management of peritoneal dialysis. European Renal Association.

Warady BA, Schaefer F, Holloway M et al. 2000. ISPD Guidelines / Recommendations: Consensus guidelines for the treatment of peritonitis in pediatric patients receiving peritoneal dialysis. *Perit Dial Int* 20: 610-24

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