

## **ISPD Infection Guidelines for 2005**

### ***Submitted by:***

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The new 2005 ISPD Infection Guidelines were published in the Feb-Mar issue of Peritoneal Dialysis International. The committee members were carefully chosen to represent different areas of the world, including Asia (Dr. Amit Gupta, Dr. W.C. Lye and Dr. Philip Li), a rapidly growing area for PD. All the nephrologists on the committee are experts in infections in peritoneal dialysis related infections. In addition, the committee includes a microbiologist (Dr. Kuijper), an infectious disease specialist (Dr. David Paterson), an immunologist (Dr. C. Holmes), and a pharmacologist (Dr. G. Bailie). Notably, for the first time nurses central to the role of caring for PD patients were included (Judith Bernardini and Linda Uttley). The committee met twice and exchanged numerous email communications to establish the new guidelines, which were then reviewed by 16 reviewers and by the ISPD Guidelines and Standards Committee, chaired by Dr Isaac Teitelbaum.

The guidelines are organized into five sections. The first section covers prevention of peritonitis and exit site infections. Keys to prevention are felt to include training of the patient in good technique, exit site care including prophylaxis against *S. aureus*, prevention of enteric source from constipation, and in some cases prophylaxis against fungal peritonitis by use of mycostatin or fluconazole during antibiotic treatment. Close monitoring of infection rates by the PD program are essential in recognizing problem areas and developing initiatives to lower the rates.

The second section of the guidelines concerns exit site infections. Exit sites with drainage should be cultured and oral therapy given until the appearance returns to normal. Long courses of therapy may be needed. For exit site infections that fail to resolve, catheter exchange may be necessary.

The third and fourth sections are on management of peritonitis. Empiric treatment of peritonitis needs to be center specific based on prior history of organisms and sensitivities. Both Gram positive and Gram negative organisms should be covered. For Gram-positive coverage, the center should choose between first generation cephalosporin or vancomycin, and for Gram-negative coverage, between an aminoglycoside versus ceftazidime or quinolone. Subsequent antibiotic administration should be dictated by the culture results and sensitivities.

Administration of antibiotics is preferably via the intra-peritoneal route, with rare exception. Use of intermittent vancomycin, aminoglycoside, and cephalosporins is well described and validated for CAPD. However, for APD, there is much less information on intermittent use, particularly for first generation cephalosporins. The committee felt that there a single daily dose of a first generation cephalosporin in APD should be avoided if possible. Alternatives are to change the patient to dwells of 3-4 hours on APD, change

the patient temporarily to CAPD, or to use vancomycin (for which there is some data on efficacy of use intermittently in APD as well as CAPD).

Indications for catheter removal include refractory exit site infections, relapsing peritonitis, refractory peritonitis and fungal peritonitis. Less clear is whether to automatically remove the catheter for peritonitis due to mycobacteria and VRE.

The last section of the new guidelines is devoted to an expanded section on recommendations regarding research that is needed in peritoneal dialysis infections. Suggestions regarding information to be included in the methods of all studies on peritoneal dialysis related infections will include description of patient population, connection methodology, training methods, exit site care and prophylaxis (if any), and outcomes of all peritonitis episodes. Research is particularly needed in continuous versus intermittent dosing of antibiotics in APD, dosing increases that might be needed based on transport category and small molecule clearances, and comparing different treatment strategies in large multi centered randomized trials, with power to detect not only differences in initial outcome, but to also evaluate the risk of relapse.