

## Appendix 41 - SPONTANEOUS BACTERIAL PERITONITIS IN ADULTS

Based on Up-To-Date Microbiology and therapy of peritonitis in peritoneal dialysis and the ISPD Peritonitis Recommendations: 2016 Update On Prevention and Treatment

The Following Protocols should be Followed
<b>Coagulase-Negative Staphylococcus</b>
It is suggested that coagulase-negative staphylococci generally be treated with IP cephalosporins or vancomycin, according to antimicrobial susceptibility, for a period of 2 weeks.
An exception is patients with coagulase-negative Staphylococcus infection who had a previous infection with the same organism; we treat such patients for three weeks
<b>Enterococcus Species</b>
It is suggested that enterococcal peritonitis should be treated for 3 weeks with IP vancomycin and suggested adding IP aminoglycoside for severe enterococcal peritonitis.
For peritonitis due to vancomycin-resistant Enterococcus (VRE), treatment is recommended for 3 weeks with IP ampicillin if the organism is susceptible or with alternative antibiotics (linezolid, daptomycin or teicoplanin, based on antimicrobial susceptibilities) if the organism is ampicillin-resistant.
<b>Streptococcal Species</b>
It is suggested that streptococcal peritonitis should be treated with appropriate antibiotics, such as IP ampicillin, for 2 weeks.
<b>Staphylococcus Aureus</b>
It is suggested that Staphylococcus aureus peritonitis should be treated with effective antibiotics for 3 weeks.
For S. aureus infections, add rifampin if there is no or little clinical response by 48 hours. Adjuvant rifampin therapy was associated with a lower risk for relapse or repeat peritonitis.
<b>Corynebacterium Peritonitis</b>
Suggested that corynebacterial peritonitis be treated with effective antibiotics for 3 weeks.
<b>Pseudomonas Peritonitis</b>
It is suggested that Pseudomonas peritonitis be treated with 2 antibiotics with different mechanisms of action and to which the organism is sensitive (e.g. IP gentamicin or oral ciprofloxacin with IP ceftazidime or cefepime) for 3 weeks.
<b>Other Gram-Negative Bacteria</b>
Suggested that non-Pseudomonas gram-negative peritonitis be treated with effective antibiotics for at least 3 weeks. if there is no response at 48 hours , can add a second antibiotic based on sensitivities.
If multiple enteric organisms (multiple gram-negative or mixed gram-negative/gram-positive organisms) are grown from PD effluent, and when there is no prompt clinical response, patient should be treated with metronidazole in conjunction with IP vancomycin and either IP aminoglycoside or IP ceftazidime for a minimum period of 3 weeks.
If multiple gram-positive organisms are grown from PD effluent, suggested that patients be treated with effective antibiotics for 3 weeks
When a surgical cause of peritonitis is suspected, the antibiotics of choice are metronidazole plus vancomycin, in combination with ceftazidime or an aminoglycoside. Monotherapy with a carbapenem or piperacillin/tazobactam may also be considered.
<b>Culture-Negative Peritonitis</b>
Suggested that negative effluent cultures on day 3 warrant a repeat dialysis effluent WBC count with differential.
If the culture-negative peritonitis is resolving at day 3, suggested discontinuing aminoglycoside therapy and continuing treatment with gram-positive coverage (e.g. first-generation cephalosporin or vancomycin) for 2 weeks
<b>Secondary Prevention</b>
It is recommended that anti-fungal prophylaxis when PD patients receive antibiotic courses to prevent fungal peritonitis.



### **Fungal Peritonitis**

It is recommended immediate catheter removal when fungi are identified in PD effluent and suggested that treatment with an appropriate anti-fungal agent be continued for at least 2 weeks after catheter removal

### **Antibiotic dosing and administration**

Intraperitoneal administration of antibiotics is preferred to intravenous administration, unless the patient appears septic.

Intraperitoneal antibiotics can be administered either continuously (with antibiotics given in each exchange) or intermittently (given once daily).

Intraperitoneal antibiotics that are administered intermittently must dwell for at least six hours.

**PA: Short-courses of treatment for SBP are effective, the shorter the duration is preferred. Many patients will respond to a treatment course of five days. Only patients who grow an unusual organism (pseudomonas, Enterobacteriaceae), an organism resistant to standard antibiotic therapy, or an organism routinely associated with endocarditis (Staphylococcus aureus or VIRIDANS group streptococci) are initially considered for longer treatment up to 10 days courses, and this should be confirmed by the prescriber**