

PHYSICIAN'S ORDER SHEET PERITONEAL DIALYSIS OUTPATIENTS CONFIRMED PATHOGEN PERITONITIS

Do not add or change orders in any section where orders have previously been written

<input checked="" type="checkbox"/> Standard Orders <input type="checkbox"/> Requires a check (✓) for activation	
Drug Allergies/Intolerances (List and provide description and reaction)	Date: _____ Time: _____
PATIENT'S DRY WEIGHT: _____ kg DATE OF PERITONEAL EFFLUENT SAMPLE: _____	
MEDICATION ORDERS	ORDER TRANSCRIBED AND ACTIVATED
<p>Peritonitis Antibiotic Orders (based on culture and sensitivity results) - See reverse for "Antibiotic Protocol for Confirmed Pathogen Peritonitis"</p> <p>IP = intraperitoneally</p> <p><input type="checkbox"/> CeFAZolin - weight based dosing</p> <p style="margin-left: 20px;"><input type="checkbox"/> Less than 50 kg CeFAZolin 1 g IP daily . . . x _____ days</p> <p style="margin-left: 20px;"><input type="checkbox"/> 50 kg or greater CeFAZolin 1.5 g IP daily . . x _____ days</p> <p><input type="checkbox"/> Vancomycin - weight based dosing</p> <p style="margin-left: 20px;"><input type="checkbox"/> Less than 50 kg Vancomycin 1 g IP q _____ days</p> <p style="margin-left: 40px;">x _____ doses</p> <p style="margin-left: 20px;"><input type="checkbox"/> 50 kg or greater Vancomycin 2 g IP q _____ days</p> <p style="margin-left: 40px;">x _____ doses</p> <p><input type="checkbox"/> CefTAZidime - weight based dosing</p> <p style="margin-left: 20px;"><input type="checkbox"/> Less than 50 kg CefTAZidime 1 g IP daily . . . x _____ days</p> <p style="margin-left: 20px;"><input type="checkbox"/> 50 kg or greater CefTAZidime 1.5 g IP daily . . x _____ days</p> <p><input type="checkbox"/> Discontinue tobramycin (if had been used for empiric therapy)</p> <ul style="list-style-type: none"> • All IP antibiotics need to dwell for at least 6 hours • Confirm compatibility of IP drug combinations with PD solution prior to administration (see reverse for chart) • If Peritoneal Dialysis (PD) effluent not clear by day 5, contact nephrologist for PD catheter removal <p>Other Antibiotics - see protocol on reverse</p> <p><input type="checkbox"/> Ciprofloxacin 500 mg PO BID x _____ days</p> <p><input type="checkbox"/> Trimethoprim/Sulfamethoxazole 1 DS tablet PO _____ x _____ days</p> <p><input type="checkbox"/> Rifampin _____ mg PO daily x 7 days</p> <p><input type="checkbox"/> Other _____ x _____ days</p> <p>Indicate the following:</p> <p><input type="checkbox"/> Relapsing peritonitis (second episode with the same organism within 4 weeks of stopping antibiotics)</p> <p><input type="checkbox"/> Repeat peritonitis (second episode with the same organism more than 4 weeks after stopping antibiotics)</p> <p><input type="checkbox"/> Recurrent peritonitis (second episode with a different organism within 4 weeks of stopping antibiotics)</p> <p>Peritonitis last 12 months: Episode <input type="checkbox"/>1 <input type="checkbox"/>2 <input type="checkbox"/>3 <input type="checkbox"/>4 <input type="checkbox"/>5</p> <p>Nephrologist to consider PD catheter removal with any of the above or more than 3 episodes of peritonitis in 12 months</p>	<p style="text-align: center;">GENERAL ORDERS/INFORMATION</p> <p>Treat for 2 weeks if sample is positive for:</p> <p><input type="checkbox"/> Coagulase Negative Staphylococcus</p> <p><input type="checkbox"/> Streptococcus species</p> <p><input type="checkbox"/> Culture Negative - <i>Keep gram positive coverage and change gram negative coverage to ceftazidime</i></p> <p>Treat for 3 weeks if sample is positive for:</p> <p><input type="checkbox"/> Staphylococcus aureus (Consider adding Rifampin)</p> <p style="margin-left: 20px;"><input type="checkbox"/> Methicillin-sensitive (MSSA)</p> <p style="margin-left: 20px;"><input type="checkbox"/> Methicillin-resistant (MRSA)</p> <p><input type="checkbox"/> Enterococcus species</p> <p><input type="checkbox"/> Gram Negative</p> <p style="margin-left: 20px;"><input type="checkbox"/> Klebsiella species <input type="checkbox"/> Escherichia coli</p> <p style="margin-left: 20px;"><input type="checkbox"/> Proteus species <input type="checkbox"/> Serratia species</p> <p><input type="checkbox"/> Pseudomonas aeruginosa</p> <p style="margin-left: 20px;"><i>Two antibiotics based on sensitivities; ceftazidime IP and ciprofloxacin PO preferred. Difficult to eradicate, may require catheter removal</i></p> <p><input type="checkbox"/> Stenotrophomonas maltophilia (3 - 4 weeks)</p> <p style="margin-left: 20px;"><i>Two antibiotics; Trimethoprim/Sulfamethoxazole (consider using high dose) and ciprofloxacin PO preferred BUT ask microbiology lab to do sensitivities. Difficult to eradicate, may require catheter removal</i></p> <p><input type="checkbox"/> Polymicrobial</p> <p style="margin-left: 20px;"><i>Consider abdominal CT scan +/- surgical consult</i></p> <p><input type="checkbox"/> Yeast/fungal - requires urgent PD catheter removal and systemic antifungal treatment.</p> <p><input type="checkbox"/> Other: _____</p> <p>FAX ORDERS TO (include unit fax cover page):</p> <p><input type="checkbox"/> WINNIPEG AREA: <u>IP drugs MUST be faxed to and dispensed by:</u> Shopper's Drug Mart - St Boniface Hospital Fax # 204-231-4012</p> <p><input type="checkbox"/> OTHER (IP orders outside Winnipeg; Oral medications as directed by the patient)</p> <p>Pharmacy _____</p> <p>Fax # _____</p> <p>PRESCRIBER CERTIFICATION This Rx represents the original of the Rx drug order. The pharmacy addressee noted above is the only intended recipient and there are no others. The original has been invalidated and securely filed and will not be transmitted elsewhere at another time. Quantity must be stated in words and numbers.</p> <p>CONFIDENTIALITY CAUTION This fax is confidential and is intended to be received by the addressee only. If the reader is not the intended recipient thereof, you are advised that any dissemination, distribution or copying of this fax is strictly prohibited.</p> <p>Use of this form for purposes or by persons not authorized under the Controlled Drugs and Substances Act and its regulations is a criminal act</p>
PHYSICIAN'S SIGNATURE _____ MD PRINTED NAME _____ MD GENERIC EQUIVALENT AUTHORIZED	<p><input type="checkbox"/> Order faxed by _____ Date/Time _____</p> <p><input type="checkbox"/> Order transcribed by _____ Date/Time _____</p> <p><input type="checkbox"/> Order verified by _____ Date/Time _____</p>

Compatibilities of Antibiotics with Peritoneal Dialysis Solutions (Prepare immediately prior to use)

DRUG	PD SOLUTION			
	DIANEAL	EXTRANEAL	NUTRINEAL	PHYSIONEAL
Cefazolin	Yes	Yes	Unknown	Yes
Cefazolin + Ceftazidime	Yes	Yes	Unknown	Unknown
Cefazolin + Gentamicin	Yes	Unknown	Unknown	Unknown
Cefazolin + Tobramycin	Yes	Unknown	Unknown	Unknown
Ceftazidime	Yes	Yes	Unknown	Unknown
Ceftazidime + Tobramycin	Yes	Unknown	Unknown	Unknown
Ceftazidime + Vancomycin	Yes	Unknown	Unknown	Unknown
Gentamicin	Yes	Yes	Yes	Yes
Gentamicin + Vancomycin	Yes	Yes	Unknown	Unknown
Tobramycin	Yes	Yes	Unknown	Yes
Tobramycin + Vancomycin	Yes	Unknown	Unknown	Unknown
Vancomycin	Yes	Yes	Yes	Yes

Addition of heparin to a concentration of less than 1000 units/L has negligible effect on stability of antibiotics admixed in PD solutions.

Antibiotic Protocol for Confirmed Pathogen Peritonitis

*IF NO RESOLUTION OF PERITONITIS AT DAY 5, URGENT REMOVAL OF PERITONEAL DIALYSIS CATHETER

Specific to Organism
Treatment should be based on culture and sensitivity results

Coagulase Negative Staphylococcus & Streptococci

Cefazolin 1.5 g IP daily (1 g if weight less than 50 kg)
Cephalosporin allergy or Methicillin-resistant Coagulase Negative Staphylococcus:
 Vancomycin 2 g IP q7 days (1 g if weight less than 50 kg)
 *q5 days if urine output greater than 500 mL/24h
Treatment duration: 2 weeks

Staph aureus MSSA

Cefazolin 1.5 g IP daily (1 g if weight less than 50 kg)
 Consider adding Rifampin 600 mg po daily for first week
 (Rifampin 450 mg po daily if weight less than 50 kg)
If allergy to Cephalosporins:
 Vancomycin 2 g IP q7 days (1 g if weight less than 50 kg)
 *q5 days if urine output greater than 500 mL/24h
 Dose to keep Vancomycin serum levels greater than 15 mg/L
Treatment duration: 3 weeks (4 weeks for bacteremia)

Staph aureus MRSA

Vancomycin 2 g IP q7 days (1 g if weight less than 50 kg)
 *q5 days if urine output greater than 500 mL/24h
 Dose to keep Vancomycin serum levels greater than 15 mg/L
 Consider adding Rifampin 600 mg po daily for first week
 (Rifampin 450 mg po daily if weight less than 50 kg)
Treatment duration: at least 3 weeks (4 weeks for bacteremia)

Gram Negative (Klebsiella, E coli, Proteus)

Adjust antibiotics based on sensitivities.
 Preferred: Ceftazidime 1.5 g IP daily (1 g if weight less than 50 kg)
 Alternative: Cefazolin 1.5 g IP daily (1 g if weight less than 50 kg) or
 Ciprofloxacin 500 mg PO BID may be used if susceptible
 Given duration of therapy, aminoglycosides (e.g. gentamicin, tobramycin)
 should be avoided due to risk of vestibular/ototoxicity. However, if tobramycin
 required, give Tobramycin 60 mg IP once daily (40 mg if less than 50 kg)
Treatment duration: 3 weeks

Fungal/Yeast/Mycobacteria

Urgent catheter removal and systemic antifungal treatment

Enterococci

Vancomycin 2 g IP q7 days (1 g if weight less than 50 kg)
 *q5 days if urine output greater than 500 mL/24h
 Alternative: Ampicillin 125 mg/L q exchange (Continuous dosing only)
Treatment duration: 3 weeks

Pseudomonas aeruginosa

Difficult to eradicate. May require catheter removal
Double coverage based on sensitivities
 Ceftazidime 1.5 g IP daily (1 g if weight less than 50 kg) +
 Ciprofloxacin 500 mg PO bid
 Given duration of therapy, aminoglycosides (e.g. gentamicin, tobramycin)
 should be avoided due to risk of vestibular/ototoxicity. However, if tobramycin
 required, give Tobramycin 60 mg IP once daily (40 mg if less than 50 kg).
Treatment duration: 3 weeks or more

Stenotrophomonas maltophilia

Difficult to eradicate. May require catheter removal
Double coverage based on sensitivities
 Trimethoprim/Sulfamethoxazole (Consider higher dose!) +
 Ciprofloxacin 500 mg po bid
 [Ceftazidime 1.5 g IP daily (1 g if weight less than 50 kg) may be used if susceptible]
 † To provide approximately 5 mg/kg/day of trimethoprim component (i.e. 1 DS tab PO bid for 75 kg person)
Treatment duration: 3 weeks or more

Culture Negative

Continue gram positive coverage (Cefazolin or Vancomycin)
 Discontinue Tobramycin (if used for empiric therapy); Change gram negative coverage to
 Ceftazidime 1.5 g IP daily (1 g if weight less than 50 kg)
Treatment duration: 2 weeks

Polymicrobial

If clinical suspicion of bowel perforation suggest CT scan & surgical consult
 Adjust antibiotics based on sensitivities.
 Given duration of therapy, aminoglycosides (e.g. tobramycin)
 should be avoided due to risk of vestibular/ototoxicity.
Treatment duration: 3 weeks or more

References: (1) Peritoneal Dialysis Related Infections Recommendations: 2010 Update. Perit Dial Int 2010;30:393-423, (2) Blondel-Hill E, Fryters S et al. Bugs & Drugs Antimicrobial Reference 2012. Alberta Health Services.