

	Policies and Procedures Title: PERITONEAL DIALYSIS- ADDING MEDICATIONS TO DIALYSATE I.D. Number: 1153
<input checked="" type="checkbox"/> Kidney Health Home Based Therapies <input checked="" type="checkbox"/> SHR Nursing Practice Committee	Source: Nursing Date Revised: May 2017 Date Effective: September 2012 Scope: SHR & Affiliates

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OVERVIEW

PD patients occasionally need medications added to their dialysate fluid, usually because of peritonitis. The medications added are heparin and antibiotics. Heparin is used to reduce fibrin formation that can form in and around the peritoneal catheter, therefore blocking dialysate flow. Various types of antibiotics may be used. Although the client may be able to perform dialysis treatments, he or she may not know how to or be able to, correctly add medications to the dialysate.

DEFINITIONS

Dialysate - commercially prepared solution that is instilled into the peritoneal cavity for dialysis.

Exchange - the cycle of emptying and refilling of fluid from the peritoneal cavity

Peritoneal Dialysis (PD) - dialysis using a semipermeable membrane (peritoneum)

Peritonitis - an inflammation/infection of the peritoneum and the surrounding tissues that can lead to major complications

ROLES

Registered Nurses, Registered Psychiatric Nurses, Graduate Nurses, Student Nurses and Licensed Practical Nurses and Graduate Licensed Practical Nurses who have successfully completed the IV Therapy Completer Course may add IV medications to peritoneal dialysate fluid bags as per chart in Appendix A.

1. PURPOSE

To safely add medications to PD dialysate, minimizing complications

2. POLICY

- 2.1 As assigned, staff nurses will add prescribed medication to PD dialysate, or assist/supervise the patient to add medications.

- 2.2 Clients who are on established PD at home, and are knowledgeable, capable and willing to add medications to their own dialysate, may continue to add medications during an acute care admission, at the discretion of the nurse.
- 2.3 Trained Family members may add medications to PD dialysate.
- 2.4 Medications manufactured for IV route are appropriate to add to peritoneal dialysate solutions, as prescribed.
- 2.5 Dialysate bags will be used within 48 hours of the addition of medications, or sooner according to the stability of the medication (see Appendix A).

3. PROCEDURE

- 3.1 Wash hands and collect supplies:
 - Medication vial
 - Alcohol swab
 - Syringe of appropriate size
 - Blunt needle (at least 1 inch long)
 - Dialysate bag (of appropriate volume and concentration, per physician's orders)
 - Sterile water or NaCl (as required for reconstitution)
 - Medication label labeled as per medication administration policy
 - Hand sanitizer
- 3.2 Perform hand hygiene.
- 3.3 Clean top of medication vial for 15 seconds using an alcohol swab and friction in a twisting motion. Allow to dry.
- 3.4 Reconstitute antibiotic as per instructions on the vial, or draw up required amount of heparin.
- 3.5 Open outer wrap of dialysate bag, and double check for proper dextrose concentration, expiry date, amount of fluid, and if there are any leaks in the bag. Choose another bag if not suitable.
- 3.6 Clean medication port on dialysate bag for 15 seconds using an alcohol swab and friction in a twisting motion. Allow to dry.
- 3.7 Inject medication into medication port on dialysate bag.
- 3.8 Remove needle and syringe and discard in sharps container.
- 3.9 Apply medication label.
- 3.10 Position container with ports up and evacuate the medication port by squeezing and tapping it.
- 3.11 Gently agitate dialysate bag back and forth to mix medication thoroughly into dialysate
- 3.12 Continue with dialysis exchange.
- 3.13 Perform hand hygiene.

3.14 Complete any required documentation.

4. REFERENCES:

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Appendix A

ANTIBIOTIC STABILITY IN PERITONEAL DIALYSIS SOLUTIONS

ANTIBIOTIC	DIALYSATE	FRIDGE TEMPERATURE (4 C)	ROOM TEMPERATURE (25 C)
CEFAZOLIN	DIANEAL	14 DAYS	7 DAYS
	EXTRANEAL	14 DAYS	7 DAYS
CEFOTAXIME	DIANEAL	1 DAY	1 DAY
	EXTRANEAL	Not reported	Not reported
CEFTAZIDIME	DIANEAL	5 DAYS	1 DAY
	EXTRANEAL	14 DAYS	2 DAYS
TOBRAMYCIN	DIANEAL	1 DAY	1 DAY
	EXTRANEAL	14 DAYS	7 DAYS
VANCOMYCIN	DIANEAL	6 DAYS	2 DAYS
	EXTRANEAL	14 DAYS	14 DAYS
CEFAZOLIN + TOBRAMYCIN	DIANEAL	1 DAY	1 DAY
	EXTRANEAL	14 DAYS	7 DAYS
VANCOMYCIN + TOBRAMYCIN	DIANEAL	1 DAY	1 DAY
	EXTRANEAL	7 DAYS	7 DAYS
VANCOMYCIN + CEFTAZIDIME	DIANEAL	1 DAY	1 DAY
	EXTRANEAL	Not reported	Not reported

Chart updated 2016

** Extraneal : icodextrin based PD solution (7.5%)
Dianeal: dextrose based PD solution (1.5, 2.5 or 4.25%)

- Ideally, antibiotics are to be added to PD solutions as close to the time of instillation as possible.
- If antibiotic/PD solution admixtures are prepared in advance, fridge storage is recommended until time of use.
- Antibiotic/PD solution admixtures warmed to body temperature (via indirect heating, cycler heater bed) that are not used immediately must be discarded.
- Separate syringes must be used for each different medication added to PD solutions.
- Addition of heparin to a concentration of less than 1000 units/L has a negligible effect on stability of antibiotics admixed in PD solutions.