Peritoneal Dialysis: PD Titanium Adapter Change

Site Applicability

PHC Renal Inpatient and Ambulatory Care settings

Practice Level

Specialized:

- Registered Nurses and Licensed Practical Nurses who have successfully completed the Nephrology Nursing Orientation to Peritoneal Dialysis (6B or 6C) and have reviewed this Decision Support Tool. The first adaptor change should be completed with supervision by a nurse competent in the procedure

Need to Know

- The peritoneal dialysis (PD) catheter adapter is changed when the catheter is damaged such as a hole in the catheter tubing near the adaptor. If less than 3 inches of the external peritoneal catheter exists, the catheter must be extended before the adaptor is changed. A sample of the drained dialysate should be sent for stat cell count, differential and culture & sensitivity
- The nephrologist needs to be contacted to determine if the *Contamination Protocol* or the *Peritonitis Protocol* should be implemented.

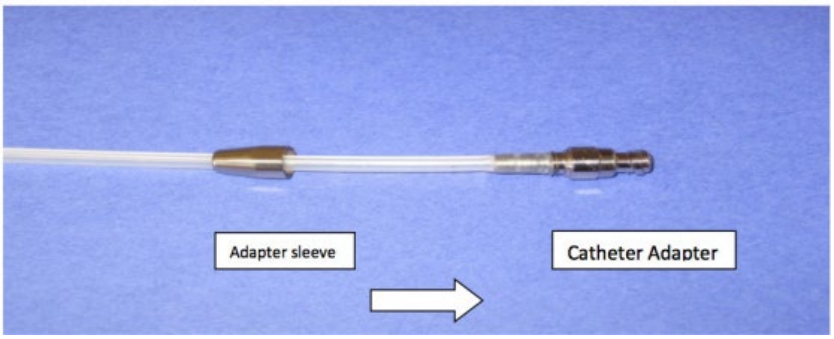
Equipment and Supplies

1. 2% CHG – alcohol free large wipes x 4 (CHG – chlorhexidine gluconate)
2. Major dressing tray
3. Transfer set
4. Face mask for the patient
5. Full face shield for the nurse
6. Minicap
7. Cap to cover hair
8. Locking titanium adapter
9. Sterile scissors
10. Sterile gloves
11. Sterile metal Kelly forceps x 2
12. Blue plastic clamp
13. Mupirocin ointment
14. Mepore dressing (9 x 15 cm)
15. 2% CHG with 70% alcohol swab sticks x 3

Procedure

Steps

Steps	Rationale
1. Clamp off the PD catheter with the blue clamp midway between exit site and the site of damage to stop the leak.	Do not use metal clamps with teeth, it can damage the catheter.
2. Notify on call nephrologist for orders for Contamination/Peritonitis protocol	
3. Preparation a. Gather supplies b. Note the LOT number and expiry date of the transfer set c. Perform hand hygiene d. Open the sterile tray and lay out all the supplies e. Unfold the chlorhexidine wipes and leave them on the sterile tray f. Place sterile drapes around the catheter site g. Put on sterile gloves h. Close the transfer set clamp on the new transfer set i. Remove the clear cap from the end of the transfer set and attach the mini cap j. Remove the blue cap from the other end of the transfer set. This end will be connected to the new adapter. k. Leave the prepared transfer set in the sterile tray	Transfer set LOT number is being logged into PROMIS to track the transfer set being used in case of a recall.
4. **Cleanse** the site where the damage is on the PD catheter as follows: a. With the first chlorhexidine wipe, UNFOLD the wipe, WRAP it around the damage site, SCRUB for 1 minute and HOLD. b. While holding the first wipe around the connection, UNFOLD the second chlorhexidine wipe, CLEAN the catheter from the damage site ~~3 inches~~ toward the patient and DISCARD c. With the third chlorhexidine wipe, UNFOLD the wipe, CLEAN from the damage site ~~3 Inches~~ away from the patient and DISCARD d. DISCARD the first chlorhexidine wipe e. With the non dominant hand take a 4 x 4 sterile gauze and hold the PD tube just above the damaged area.	

f. With the dominant hand, cut the PD catheter using sterile scissors, 1 cm from the damage site close to the patient. g. Clean the tip of the new end of the PD catheter with the fourth chlorhexidine wipe for 1 minute and allow to air dry.	
5. Inserting the Adapter and New Transfer Set  a. Slide the sleeve onto the catheter with the narrow end toward the patient b. Inset the adapter into the catheter until the entire tail is covered c. Slide the sleeve up the catheter over the tail of the adapter d. Screw the sleeve to the adapter until the connection is tight e. Attach the transfer set securely using Kelly forceps around the metal edge of the adapter f. Remove the blue plastic clamp on the PD catheter g. Secure the transfer set in a peritoneal dialysis belt or with a catheter immobilizing tape loop h. Perform PD exit site care and change the PD exit site dressing as per protocol	Maintain sterile technique to reduce the risk of contamination of the catheter that can result in infection The transfer set needs to be connected securely to the adapter so it doesn't disconnect accidently which could result in infection
6. Collect dialysate sample for cell count, differential, culture and sensitivity	
7. Continue with contamination/peritonitis protocol as per provider orders	

Documentation

Document assessment and interventions in in PowerChart, iView.

Include:

- Date and time adapter and transfer set change procedure completed
- Location and nature of PD catheter damage (reason for adapter change)
- Transfer set LOT number and expiry date

- Dressing change performed and condition of exit site, any signs and symptoms of infection
- Peritonitis or contamination protocol (if initiated)
- Appearance of dialysate
- Education provided to patient and family

Patient and Family Education

1. Patient to inspect their PD catheter adapter and transfer set for damage or malfunction daily
2. Patient to report any signs of damage or malfunction immediately to the PHC clinic (or nephrology inpatient unit on weekends and nights) for intervention
3. If a lead in PD catheter or transfer set is noted, patient should stop dialysis and clamp the catheter proximal to the damaged area. Cover with sterile gauze and go to the closest emergency room
4. Use approved soaps and cleaning solutions (e.g. Sea-Clens spray, Chlorhexidine Skin Cleanser 4%) for catheter care
5. Keep sharp objects and scissors away from the catheter

Related Documents

1. PD Procedures: Exit Site Care Post-Operative PD Catheter Insertion. Retrieved from http://www.bcrenal.ca
2. B-00-12-0083 - Peritoneal Dialysis: Exit Site Dressing Change for a Healed Exit Site
3. B-00-12-10062 – Peritoneal Dialysis: Transfer Set Change

References

BC Renal Agency. (2018) *Titanium adapter change*. Retrieved May 31, 2023 from http://www.bcrenal.ca/resource-gallery/Documents/Titanium%20Adapter%20Change.pdf

Bodin, S. (2022) Peritoneal Dialysis Access. In *Contemporary nephrology nursing* (4th Ed.) pp439-454.

Persons /Groups Consulted

PD Nurses, 6C PD Clinic

Revised By

Clinical Nurse Leader/Nurse Educator Independent Home Dialysis Therapies Program (PD and Home Hemodialysis)

Nurse Educator, Nephrology/Urology Inpatient Unit

First Released Date:	31-JUL-1994
Posted Date:	15-JUN-2023
Last Revised:	15-JUN-2023
Last Reviewed:	15-JUN-2023
Approved By: *(committee or position)*	PHC
	Professional Practice Standards Committee
Owners: *(optional)*	PHC
	Renal Program