Peritoneal Dialysis (PD) – Intraperitoneal Vancomycin Administration

Cross References	Medication Handling in NSW Public Health Facilities; NSW Health PD2013_043 Peritoneal Dialysis – Peritonitis Treatment Protocol; Renal Department Protocol Peritoneal Dialysis – Antibiotic Administration Guidelines; Renal Department Protocol Continuous Ambulatory Peritoneal Dialysis (CAPD) Freeline Solo Exchange Procedure; Renal Department Protocol
1. Purpose	To ensure the administration of intraperitoneal Vancomycin is performed according to best practice guidelines reducing the risk of infection and ensuring patient safety

2. Process

2.1 Devices

2.1.1 Equipment

- ☐ Trolley
- ☐ Portable IV pole
- ☐ Water for injection – 2 x 10 ml ampoules
- ☐ Alcohol swabs x 5
- ☐ Blue clamp

2.1.2 Key parts

- ☐ Vancomycin – 4 x 500 mg vials
- ☐ Drawing-up needle (18G)
- ☐ 21 G needle
- ☐ 20 ml syringe
- ☐ PD fluid (Freeline Solo bag)

2.1.3 Key site

- Rubber bung on Vancomycin vials
- Rubber bung on PD fluid
- Abdominal PD catheter

2.2 Recommended Intraperitoneal Dose for treatment of Peritonitis

- Weekly dose of 30 mg/kg to a maximum of 2 gram for 3 weeks
- Levels are not required if dosing is weekly, if levels are ordered aim for <15mg/L before administering Vancomycin.

2.3 Procedure

1. Warm the selected PD fluid (freeline solo bag) on the warmer
    a. Select appropriate PD fluid strength by conducting a fluid assessment on patient 30 minutes prior to CAPD procedure
    b. Note: PD fluid takes 30 minutes to warm.
2. Ensure the "5 Rights" of Principles for Safe Medication Administration is observed with second person check
3. Perform hand hygiene
4. Identify and gather equipment and key parts for procedure
5. Check expiry dates on all antibiotic vials, PD fluid and water for injection
6. Clean trolley/work surface with detergent
7. Perform hand hygiene
8. Don gloves
9. Prepare general aseptic field equipment and key parts near the patient's bedside
10. Use the sharp edge of the blue clamp to open outer pouch of the dialysis bag. DO NOT USE SCISSORS OR KNIVES
11. Place the opened bag on top of the clean trolley and ensure the lines are facing up
12. Recheck the dialysis bag strength, volume, expiry, colour and for leakage
13. Prepare the antibiotics using aseptic technique ensuring all the key parts/sites are protected
    a. Alcohol swab the rubber bung on Vancomycin vials;
    b. Attach drawing up needle to 20 ml syringe;
    c. Open water ampoules and aspirate all content into the 20 ml syringe;
    d. Push needle into the rubber bung on a Vancomycin vial, inject 5 mls of water, invert vial and shake until all powder dissolves then aspirate all content;
    e. Repeat same procedure to the subsequent Vancomycin vials;
    f. Once all Vancomycin vials are emptied into the 20 ml syringe, replace drawing-up needle with 21G needle.
14. Administer the antibiotics into the dialysis fluid using aseptic technique ensuring all the key parts/sites are protected
    a. Alcohol swab the rubber bung on dialysis fluid;
    b. Push needle into the centre of the dialysis fluid bung and inject all content.
    Note: For accidental piercing of the bag or the side of the bung , use a new dialysis fluid
15. Administer Vancomycin intraperitoneally through CAPD exchange as per Continuous Ambulatory Peritoneal Dialysis (CAPD) Freeline Solo Exchange Procedure; Renal Department Protocol
    a. Note: Dwell intraperitoneal Vancomycin for 6-8 hours
16. Wear PPE
17. Discard bag and lines in the clinical waste bin, discard needles in sharps bin
18. Remove gloves and PPE
19. Perform hand hygiene
20. Clean trolley after use and perform hand hygiene

21. Sign and co-sign the medication chart 22. Document the procedure on the CAPD chart and patient notes 23. Handover to the next shift	
3. Network file location/ reference, if applicable	St George Hospital Renal Website: http://stgrenal.org.au/
4. External References / Further Reading	Walker, A. (2014). Management of peritoneal dialysis-associated peritonitis in adults and children. *The KHA-CARI Guidelines – Caring for Australasians with Renal Impairment* [cited 2015 March]; Available from: http://www.cari.org.au/Dialysis/dialysis%20peritonitis/dialysis_peritonitis.html Bannister, K. (2014). The influence of peritoneal dialysis systems and solutions on the incidence of peritonitis and catheter-related infections. *The KHA-CARI Guidelines – Caring for Australasians with Renal Impairment* [cited 2015 March]; Available from: http://www.cari.org.au/Dialysis/dialysis%20peritonitis/dialysis_peritonitis.html Li, P. K., Szeto, C., Piraino, B., Bernardini, J., Figueiredo, A., Gupta, A., Johnson, D., Kuijper, E., Lye, W., Salzer, W., Shaefer, F., and Struijk, D. G. (2010). Peritoneal Dialysis – Related Infections Recommendations 2010 Update. *Peritoneal Dialysis International*, 30(4), 393-423. doi: 10.3747/pdi.2010.00049 Dombros, N., Dratwa, M., Feriani, M., Gokal, R., Heimburger, O., Krediet, R., . . . Verger, C. (2005). European best practice guidelines for peritoneal dialysis. 4 Continuous ambulatory peritoneal dialysis delivery systems. *Nephrology Dialysis Transplantation, 20 Suppl 9*, ix13-ix15. doi: 10.1093/ndt/gfi1118

Revision and Approval History

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