

PERITONEAL DIALYSIS (PD) – INTRAPERITONEAL LIGNOCAINE / LIDOCAINE or SODIUM BICARBONATE ADMINISTRATION FOR DRAIN OR INFLOW PAIN MANAGEMENT SGH

<p>Cross References (including NSW Health/ SESLHD policy directives)</p>	<p>NSW Health PD2013_043 Medication Handling in NSW Public Health Facilities NSW Health PD2017_013 Infection Prevention and Control Policy Australian Commission on Safety and Quality in Health Care National Standard for User Applied labelling of Injectable Medicines, Fluids and Lines NSW Health PD2014_024 Patient Identification Bands NHMRC Australian Guidelines for the prevention and control of Infection in Healthcare NSW Health PD2017_026 Clinical and Related Waste Management for Health Services SGH-TSH CLIN027 Aseptic Technique - Competency and Education Requirements SGH CLIN443 Peritoneal Dialysis (PD) – Intraperitoneal Additives and Antibiotics SGH Renal WPI 216 Automated Peritoneal Dialysis (APD) Connection And Disconnection Procedure – Claria Dialysis Machine SGH Renal WPI 216 Automated Peritoneal Dialysis (APD) Connection And Disconnection Procedure – Claria Dialysis Machine</p>
<p>1. What it is</p>	<p>A clinical business rule to ensure the administration of intraperitoneal Lignocaine / Lidocaine or Sodium Bicarbonate for PD related pain management is performed according to best practice guidelines reducing the risk of infection and ensuring patient safety</p>
<p>2. Risk Rating</p>	<p>Medium</p>
<p>3. Employees it Applies to</p>	<p>Registered Nurses (RN) trained in peritoneal dialysis Medical Officers (MO) trained in peritoneal dialysis</p>

4. Process

Refer to [SGH CLIN443 Peritoneal Dialysis \(PD\) – Intraperitoneal Additives and Antibiotics](#)

- Inflow and/or drain pain during PD or after PD catheter related procedure are usually self-limiting and may resolve within 3 months through remedial clinical actions i.e. increasing tidal volume, repositioning during dialysis, resolving constipation or oral analgesia. However, in some cases they persists and intraperitoneal (IP) Sodium Bicarbonate or Lignocaine / Lidocaine may be effective.

4.1 RECOMMENDED INTRAPERITONEAL DOSE AND USAGE

- Sodium Bicarbonate 8.4% (84 mg/mL or 1mmol) or Lignocaine / Lidocaine 1% (10 mg/mL) or Lignocaine / Lidocaine 2% (20 mg/mL) are recommended to be added to PD fluid to relieve drain or inflow pain during PD
- Intraperitoneal Sodium Bicarbonate or Lignocaine / Lidocaine must be prescribed on eMEDs/medication chart, it is not nurse initiated.
- Note: IP Lignocaine / Lidocaine or Sodium Bicarbonate may not be effective for drain pain related to the PD catheter tip position

4.1.1 Intraperitoneal Sodium Bicarbonate 8.4% (84 mg/mL or 1mmol)

Initial dose of 2 mL in every 1 Litre PD fluid. Maximum dose of 5mL in every 1 Litre PD fluid

- For APD or intermittent PD (IPD): Initial dose of 12 mL in every 6 Litre PD fluid. Increase dosing if pain persists to a maximum of 30 mL per 6 Litre PD fluid
- For CAPD: Initial dose of 4 mL in every 2 Litre PD fluid. Increase dosing if pain persists to a maximum of 10 mL per 2 Litre PD fluid

4.1.2 Intraperitoneal Lignocaine / Lidocaine 1% (10mg/mL) or Lignocaine / Lidocaine 2% (20 mg/mL)

Maximum dose of 100mg/day

- For APD or IPD: Initial dose is 2% Lignocaine / Lidocaine 1 mL in every 6 Litre PD fluid. Increase dosing if pain persists up to a maximum of 100 mg/day only
- For CAPD: Initial dose is 1% Lignocaine / Lidocaine 1 mL in every 2 Litre PD fluid. Increase dosing if pain persists up to a maximum of 100 mg/day only

4.2 DEVICES

4.2.1 Equipment

- Trolley
- Alcohol swabs
- Blue clamp

4.2.2 Key parts

- Lignocaine / Lidocaine (1% or 2%) or Sodium Bicarbonate 8.4% (84 mg/mL or 1mmol) ampoule
- Drawing-up needle (18G)
- 21 G needle
- 10 mL syringe
- Minicap
- PD fluid

4.2.3 Key site

- Rubber bung on PD fluid
- Abdominal PD catheter

4.3 PROCEDURE

1. Warm the selected PD fluid on the warmer or PD machine
 - a. Select appropriate PD fluid strength by conducting a fluid assessment on patient 30 minutes prior to PD 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 Sodium Bicarbonate or Lignocaine / Lidocaine ampoules and PD fluid

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 injection ports are facing up
12. Recheck the dialysis bag strength, volume, expiry, colour and for leakage
13. Prepare Sodium Bicarbonate or Lignocaine / Lidocaine using aseptic technique ensuring all the key parts/sites are protected as per [SGH CLIN443 Peritoneal Dialysis \(PD\) – Intraperitoneal Additives and Antibiotics](#)
14. Use a new needle with smaller bore (21 G needle) and carefully administer Sodium Bicarbonate or Lignocaine / Lidocaine into the dialysis bag using aseptic technique ensuring all the key parts/sites are protected as per [SGH CLIN443 Peritoneal Dialysis \(PD\) – Intraperitoneal Additives and Antibiotics](#):
 - a. Alcohol swab the injection port on dialysis fluid and wait to dry prior to injecting medication
 - b. Push needle into the centre of the dialysis fluid injection port and inject appropriate Sodium Bicarbonate or Lignocaine / Lidocaine dosage into PD fluid

Note: For accidental piercing of the bag or the side of injection port, discard the bag and use a new PD fluid bag
15. Repeat procedure 13 and 14 to subsequent PD fluid bags
16. Administer Lignocaine / Lidocaine or Sodium Bicarbonate intraperitoneally through APD or CAPD as per [Renal SGH WPI 217 Continuous Ambulatory Peritoneal Dialysis \(CAPD\) Freeline Solo Exchange Procedure](#) or [Renal SGH WPI 216 Automated Peritoneal Dialysis \(APD\) Connection And Disconnection Procedure – Claria Dialysis Machine](#)
17. After completion, wear PPE as per NHMRC Australian Guidelines for the prevention and control of Infection in Healthcare and NSW Health PD2017_013 Infection Prevention and Control Policy
18. Discard used equipment as per NSW Health PD2017_026 Clinical and Related Waste Management for Health Services
19. Remove gloves and PPE
20. Perform hand hygiene
21. Clean trolley after use and perform hand hygiene
22. Sign and co-sign eMeds/medication chart
23. Document procedure on the PD chart and clinical notes
24. Handover to the next shift and inform PD team

5. Keywords	Peritoneal Dialysis, Drain pain, In-flow pain
6. Functional Group	Renal, Peritoneal Dialysis
7. External References	Blake, P. (2014). Drain Pain, Overfill, and How They Are Connected. <i>Peritoneal Dialysis International: Journal of the International Society for Peritoneal Dialysis</i> , 34(4), 342–344. http://doi.org/10.3747/pdi.2014.00104

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<p>8. Consumer Advisory Group (CAG) approval of patient information brochure (or related material)</p>	<p>Not applicable</p>
<p>9. Implementation and Evaluation Plan Including education, training, clinical notes audit, knowledge evaluation audit etc</p>	<p>In-services Publication on SGH-TSH CIBR intranet page</p>
<p>10. Knowledge Evaluation</p>	<p>Q1: When is IP Lignocaine / Lidocaine or Sodium Bicarbonate recommended?</p>

SGH CLIN415 Clinical Business Rule

	<p>A: To relieve drain or inflow pain in PD</p> <p>Q2: When is IP Lignocaine / Lidocaine or Sodium Bicarbonate not recommended?</p> <p>A: For drain pain related to the PD catheter tip position</p> <p>Q3: Is IP Lignocaine / Lidocaine or Sodium Bicarbonate nurse-initiated?</p> <p>A: No. IP Lignocaine / Lidocaine or Sodium Bicarbonate must be prescribed on eMeds/medication chart by a medical officer</p>
11. Who is Responsible	<p>Director of St George and Sutherland Renal Service. Nursing Unit Manager, Dialysis Unit</p>

Approval for Peritoneal Dialysis (PD) – Intraperitoneal Lignocaine / Lidocaine or Sodium Bicarbonate Administration for Drain or Inflow Pain Management	
Specialty/Department Committee	<p>Committee title: Peritoneal Dialysis Committee Chairperson name/position Franziska Pettit, Staff Specialist Date: 20.05.20</p>
Nurse Manager	<p>Name/position: Christine Day, Nurse Manager Medicine Date: 28.05.20</p>
Medical Head of Department	<p>Name /position: George Mangos, Department Head Renal Services Date: 20.05.20</p>
Safe Use of Medicines Committee (SGH)	<p>Chairperson’s Name: A/Prof Winston Liauw Date: 03.08.20</p>
Contributors to CIBR development e.g. CNC, Medical Officers (names and position title/specialty)	<p>Ivor Katz, Staff Specialist</p>

Revision and Approval History

Date	Revision number	Author (Position)	Revision due
Sep 2017	1	Anna Claire Cuesta (PD CNC)	Sep 2020
May 2020	2	Anna Claire Cuesta (PD CNC)	May 2023

General Manager’s Ratification	
Name: Paul Darcy (SGH)	Date: 29.07.20