

# PD Procedures

## Peritoneal Dialysis Following Elective Hernia Surgery Without Interim Hemodialysis



### 1.0 Practice Standard

The following guideline outlines considerations for the management of peritoneal dialysis patients following elective hernia surgery:

- Laparoscopic umbilical and inguinal hernia repair may consider restarting PD 48 hours post hernia surgery using NIPD (if available) and reduced exchange volumes for approximately 1 month
- Large incisional hernias requiring intra peritoneal mesh will require temporary switch to HD for 6-8 weeks
  - Arrange HD access placement if hemodialysis is anticipated post hernia surgery

### 2.0 Guideline Considerations

- Management of dialysis using a PD based protocol after hernia surgery must be adapted for:
  - Type of hernia repair
  - Available PD options
  - Patient:
    - residual renal function
    - laboratory findings
    - peritoneal membrane characteristics

### 3.0 Definitions and Abbreviations

NIPD: nocturnal intermittent peritoneal dialysis

IPD: intermittent PD

CAPD: continuous ambulatory PD

CCPD: continuous cycling PD

## 4.0 Protocol Considerations

	PROTOCOL CONSIDERATIONS	RATIONALE
<b>All patients</b>	<ul style="list-style-type: none"> <li>Continue standard PD therapy until the morning of surgery</li> <li>Drain the PD fluid prior to surgery</li> <li>No dialysis for the first 24 - 48 hours post hernia surgery</li> <li>Consider laboratory investigation at re start of PD and weekly</li> </ul>	<ul style="list-style-type: none"> <li>Dependent on patient blood work and RRF. PD may be started the night of surgery as outlined if necessary</li> <li>Patient assessment required to ensure patient is receiving adequate dialysis</li> </ul>
<b>CAPD patient</b>	<p><b>Week 1 &amp; 2 post-op</b></p> <ul style="list-style-type: none"> <li>IPD (if available option): <ul style="list-style-type: none"> <li>3 x/week using 1 L exchange</li> <li>8-10 hour duration</li> <li>Exchanges to be performed in supine position</li> </ul> </li> <li>If IPD is not available, consider: <ul style="list-style-type: none"> <li>CAPD 1 L exchanges x 5 for 1 week</li> <li>Increase gradually to 1.5L on week 2</li> </ul> </li> </ul> <p><b>Week 3 &amp; 4 post-op</b></p> <ul style="list-style-type: none"> <li>Resume CAPD using low volume 1-1.5 L x 5 exchanges/day for 2 weeks.</li> </ul>	<ul style="list-style-type: none"> <li>Patient must remain in supine position while dialysis fluid is in the abdomen to minimize intra abdominal pressure.</li> <li>Abdomen should remain dry between IPD therapy to minimize intra abdominal pressure</li> </ul>
<b>CCPD patient</b>	<p><b>Week 1 post-op</b></p> <ul style="list-style-type: none"> <li>NIPD: <ul style="list-style-type: none"> <li>1 L exchanges</li> <li>8-10 hour duration</li> <li>Dry day</li> <li>Exchanges to be performed in supine position</li> </ul> </li> </ul> <p><b>Week 2 – 4 post op</b></p> <ul style="list-style-type: none"> <li>Continue NIPD <ul style="list-style-type: none"> <li>Gradually increase fill volume with no last fill.</li> <li>*May consider small last fill volumes as tolerated</li> <li>Exchanges to be performed in supine position</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Cycler to be programmed for <b>no last fill</b> to permit a dry peritoneal cavity during ambulatory periods</li> </ul>
<b>All patients</b>	<ul style="list-style-type: none"> <li>Resume preoperative PD prescription after 4 weeks (in consultation with surgeon)</li> </ul>	

*Disclaimer: The procedure steps may not depict actual sequence of events. PD program and patient specifics must be considered in applying Clinical Practice Decision Support Tools.*

## 5.0 Patient Teaching Considerations

PATIENT TEACHING	RATIONALE
1. Patient to notify PD unit of hernia surgery date	<ul style="list-style-type: none"> <li>Permit organization of pre- and post-op care</li> </ul>
2. Patient to be instructed to drain all PD fluid prior to surgery	
3. Patient to remain dry first 24 – 48 hours post op and to call PDU for therapy instructions	<ul style="list-style-type: none"> <li>Support healing</li> <li>Minimize intra abdominal pressure</li> </ul>
4. Exchanges to be performed in supine position	<ul style="list-style-type: none"> <li>Patient must remain in supine position while dialysis fluid is in the abdomen to minimize intra abdominal pressure</li> </ul>
5. Abdomen should remain dry between IPD or CCPD therapy (no last fill)	<ul style="list-style-type: none"> <li>Minimize intra abdominal pressure</li> </ul>

## 6.0 Documentation Considerations

- PD therapy information (fill volume, frequency of exchanges, in flow/outflow)
- Patient tolerance to PD therapy
- Abdominal appearance
  - Evidence of leak

## 7.0 Special Considerations: Interventional Guidelines (Does Not Replace Individualized Care And Clinical Expertise)

- Reports indicate that patients undergoing elective hernia repair may continue standard PD therapy.
- PD therapy should be withheld, if possible, for 24 – 48 hours post surgery.
- Reintroduce PD using principles of low intra abdominal pressure: small volumes of PD solution ideally using a night cyclor and dry day for a 2 week duration post surgery

## 8.0 References

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Crabtree John. Hernia repair without delay in initiating or continuing peritoneal dialysis. Perit Dial Int Mar-Apr 2006;26(2):178-82.

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Baldo Sagrario, Power Albert, Papalois Vassilios, Brown Edwina. Impact of Hernias on Peritoneal Dialysis Technique Survival and Residual Renal Function. Perit Dial Int Nov-Dec 2013;33(6):629-634

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St Paul's Hospital protocol for peritoneal dialysis before and after hernia repair. May 2014

FHA post hernia repair prescription protocol

## **9.0 Developed By**

- BC Renal Provincial PD RN Committee

## **10.0 Reviewed By**

- Provincial PD RN Committee
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## **11.0 Created**

- August 2021