UHL Peritoneoscopic insertion of peritoneal dialysis catheter Standard Operating Procedure (LocSSIPs)

<table>
<thead>
<tr>
<th>Trust Reference</th>
<th>C61/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Description</td>
<td>Reason for Change</td>
</tr>
<tr>
<td>Change in format</td>
<td>Trust requirement</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>APPROVERS</th>
<th>POSITION</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person Responsible for Procedure:</td>
<td>Consultant Nephrologists</td>
<td>Dr Osasuyi Iyasere</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dr Peter Topham</td>
</tr>
<tr>
<td>SOP Owner:</td>
<td>Head of Service (Nephrology)</td>
<td>Dr Richard Baines</td>
</tr>
</tbody>
</table>

Introduction and Background:

This LocSIPP covers peritoneal dialysis catheter insertions (PDI) done peritoneoscopically by nephrologists in the ward 10 procedure room at LGH. The procedure can either be a day case (patients cared for on ward 10 day case) or inpatient.

Cases unsuitable for peritoneoscopic insertion

- Patients unwilling to have the procedure under local anaesthetic and sedation.
- Patients with contraindications to sedation.

Cases unsuitable for Day Case catheter insertion

- Patients on oral anticoagulation.
- Patients with no responsible adult to return home to.

Cases unsuitable for peritoneoscopic catheter insertion must be referred to the transplant team for assessment and surgical placement of PD catheter.

Referrals will be made in writing to Dr Iyasere or Dr Topham for all day cases and discussed verbally with Dr Iyasere or Dr Topham, Consultant Nephrologist for all in patients. A day case surgical waiting list form will be completed for each patient.
List management and scheduling:

Prof Barratt’s secretary will be responsible for preparing the procedure lists and sending a letter to the patients for day case PDI advising them of the date of the procedure (which will be a Tuesday morning) and asking them to telephone ward 10 day case to make an appointment at least a week before to attend for pre assessment. The procedure list will be emailed to the procedure room staff, ward 10 day case staff, ward managers for 10, 17 and 15N as well as Dr Iyasere or Dr Topham. Patients who do not attend will be offered a second procedure date. Patients who do not attend the second time will have a letter sent to the referring consultant to notify them.

Patient preparation:

The patients for day case PDI will attend for pre assessment at least a week before the procedure. The following information will be required prior to admission for the procedure.

- Patient name
- ID number, NHS or S number
- Date of birth
- Gender
- Significant comorbidities
- Allergies
- Infection risk
- Site of post procedural care

The following bloods will be taken: Full blood count, PT & APPT, Renal profile and group and save. Results will be reviewed by Dr Iyasere or Dr Topham in the week prior to the procedure to confirm the PDI can be performed. All patients will have nose swabs taken for carriage of Staphylococcus results forwarded to the Renal Home Care Team and all will commence mupirocin nasally and aquasept washes until PD catheter insertion.

The patient will be provided with a prescription for laxatives (senna two tablets at night and lactulose 10ml twice daily) and asked to start these in preparation of commencing peritoneal dialysis.

Patients will be provided with a patient information leaflet on PD catheter insertion summarising the procedure. In patients will have the same pre procedure investigations and treatment as well as receiving the same information leaflet.

Patients will be required to fast from midnight the night before the procedure. There is no requirement for IV fluids.

INR must be less than 1.2 and platelets greater than 100.

Anti-coagulation

Anticoagulants such as warfarin should be withheld prior to the procedure (refer to the UHL Anticoagulation bridging therapy for elective surgery and procedures guideline: B30/2016).

The patient will all have been seen by a member of the renal home care team prior to the procedure. The patient will be consented by the consultant performing the procedure.

Risks to be quoted for the procedure:

- Local bleeding and haematoma formation (3.4%)
- Catheter related infection (2.6% cases)
- Bowel perforation (0.8% of cases)
- Sedation effects on BP and breathing

The patient will receive a pre procedure dose of Teicoplanin 400mg intravenously.
Peritoneoscopic insertion of peritoneal dialysis catheter
Author: DR Peter Topham and Dr Osasuyi Iyasere - Consultant Nephrologists
Approved at Renal Guidelines Meeting September 2019  
next review: September 2022

Workforce – staffing requirements:

The procedure requires the following team to be present throughout the procedure.
- Nephrology consultant
- Assistant experienced in the procedure
- Nursing Assistant
- Suitably trained health professional to administer the sedation

Ward checklist, and ward to procedure room handover:

The patient will be collected by a member of the procedure room staff and asked to empty their bladder prior to entering the procedure room.

Procedural Verification of Site Marking:

The PD exit site will be marked on the day of the procedure by the operating consultant.

Team safety briefing

The team safety briefing will be performed by the staff involved in the procedure before the start of each procedure session, in the Ward 10 procedure room, where the order of the procedure list will be confirmed and any special patient considerations will be highlighted.
A safety briefing checklist will be completed (see attached).

Sign In:

On entering the procedure room staff will complete the first part of the procedure checklist. This will usually be completed by either the assistant or the NA.

Time Out:

This will take place prior to starting the procedure using the second part of the procedure checklist.
Performing the procedure:

**Peritoneoscopic PD catheter insertion**

**Setting up ward 10 procedures room**

Ensure sufficient CO₂ for insufflator use, & filter changed weekly.

**Equipment required**

- Peritoneoscope and light guide
- PDI sterile pack: to include:
  - drapes
  - scissors
  - Verres needle
  - scalpel holder
  - artery forceps
  - tubing for insufflator
  - 6" Debakey forceps
- Pink non-alcoholic chlorhexidine for skin prep, razor
- PD catheter stylet
- Gown, gloves, theatre cap and theatre mask
- Lidocaine with 2% adrenaline, sterile gel, 100ml bag of normal saline
- Camera sleeve
- PD catheter, titanium plug & cap
- PD catheter implantation pack: VP210 [with cuff implantor]
- Curved cutting 2 O undyed vicryl suture

The procedure is performed under conscious sedation as per the UHL sedation policy (see attached)

**Monitoring:**

The following monitoring will take place during the procedure.

- O₂ Sats - continuously
- ECG - continuously
- Blood Pressure – every five minutes
- Pulse rate - continuously
- Respiratory rate -
- Conscious level – every five minutes
- Temp – prior to starting
- BMs – prior to starting

**Prosthesis verification:**

The PD catheter pack will be checked prior to opening for correct size and then the catheter will be checked again prior to insertion.

**Prevention of retained Foreign Objects:**

The PDI insertion packs will contain a list of contents which will be checked by 2 members of staff at the start and end of the procedure.

No swabs are used internally.
All equipment is checked each time it is used.

Radiography:
N/A

Sign Out:

The final part of the procedure checklist will be completed before the patient leaves the procedure room. The procedure note will be completed by the consultant who has performed the procedure and documented in the patients notes.

Handover:

After completion of the procedure the patient will be returned to ward 10 day case or the ward (if inpatient) and handed over to the staff. Any specific instructions will be documented in the Medical notes.

Team Debrief:

A team debrief will happen after each PD list
It will take place in the ward 10 treatment room and all the team involved in the procedure will be present. The debrief will include a review of each procedure and a debriefing checklist will be completed for each procedure. (See attached)
The checklist will include
- A record of any equipment problems/malfunctions
- A record of any procedural problems
- A record of any sedation issues
- A list of any actions required along with who will be responsible for dealing with the required actions.
The checklists will be files in the ward 10 treatment room along with the procedure log. They will be used for audit purposes which will in turn inform improvements

Post-procedural aftercare:

On return from the Ward 10 procedure room the patient will have a full set of observations taken (Temp, BP, PR, oxygen saturation and conscious level) and these will repeated every 15 minutes for 1 hour, every 30 minutes for 2 hours and then 4 hourly thereafter until discharge for day cases or until post procedure review for inpatients.
The patient will be allowed to sit up immediately if they wish and get out of bed after 4 hours bed rest.
Patients will have simple analgesia prescribed on their chart on a PRN basis for post-procedure analgesia if required.
 Patients will be observed for 6 hours before being allowed home (if day case) after review by Dr Iyasere or Dr Topham.
If there are any problems during the post-procedure period nursing staff should immediately inform Dr Iyasere, Dr Topham or the Renal Specialist Registrar on call for that day.

Discharge:

All patients will be reviewed 6 hours post-procedure by Dr Iyasere or Dr Topham. If there are no problems day case patients will be discharged home in the care of a responsible adult.
If required a prescription for simple analgesia will be provided. The patient will be provided with a post-PD catheter insertion information leaflet which will give information on catheter exit site care and the dates for their exit site review and training date and a sedation advice leaflet. Dr Iyasere or Dr Topham will confirm that the patient has a suitable outpatient review date and that the MDT meeting has the patient’s details for the Resting Patient list. Dr Iyasere or Dr Topham will update the medication list on PROTON and generate a discharge summary/TTO for the referring Consultant Nephrologist and GP, detailing the insertion and training date.

Governance and Audit:

Safety incidents will comprise equipment malfunction, the need for sedation reversal agents (flumazenil or naloxone), the need for atropine or the requirement of admission following a planned day case procedure. The Datix system will be used to report any safety incidents. Datix reports will be reviewed on a monthly basis at the renal mortality and morbidity meeting and outcomes documented in the meetings minutes. All peritoneoscopic PD catheter insertions performed by Nephrologists and Transplant Surgeons will be audited annually. The following outcomes will be audited:

- Incidence of:
  - Viscus perforation
  - Significant procedural haemorrhage
  - Exit site infection
  - PD catheter leaks
  - Peritonitis episodes
  - PD catheter malposition and primary failure
  - 30 day mortality
  - Use of flumazenil
  - Use of naloxone
  - Sustained drop in O2 sats <90%

Training:

All staff who insert PD tubes peritoneoscopically must:

a. Be taught by a registered health care professional who is experienced in the insertion of the device and has been assessed as competent themselves
b. Have completed a period of supervised practice, the time span of which will be agreed by the assessor but to be completed within 6 months
c. Successfully complete a final competency based assessment by an appropriately trained assessor
d. Maintain records of the competency assessment as to provide evidence if required
e. Successfully completed mandatory Aseptic Non-touch Technique training on HELM
f. Maintain knowledge and skills and provide evidence of this as agreed with line manager as part of the annual appraisal process

Staff new to the Trust who have been trained elsewhere must:

a. Provide evidence of the training and assessment programme they have successfully completed
b. Comply with the relevant Trust policies and undertake additional training relating to equipment and documentation as required
c. Undertake a one off practical assessment by an appropriate assessor within own CMG/Ward/Unit

To be able to assess the knowledge and competencies of others, the assessor must:

a. Be confident and competent in performing the skill
b. Practice the skill regularly

c. Have a sound knowledge of current policies and procedures

d. Be identified by their line manager as an assessor

e. Ideally be able to show evidence of Continuing Professional Development relating to the skill

All other new staff involved in the procedure will be required to have training appropriate for their role, read the SOP and have the opportunity to discuss with Prof. Barratt or Dr Topham before signing a copy of the document which will be held by Jane Gilbert, Prof. Barratt’s secretary.

Documentation:

The procedure will be documented in the patient notes and on PROTON. The safety checklist will be filed in the patient notes

References to other standards, alerts and procedures:


UHL Safer Surgery Policy: B40/2010

UHL Sedation Policy: Safety and Sedation of Patients Undergoing Diagnostic and Therapeutic Procedures B10/2005

UHL Consent to Treatment or Examination Policy A16/2002

UHL Delegated Consent Policy B10/2013


Attachments.

1. Briefing checklist
2. Surgical Checklist
3. Brief checklist

Check list (Based on WHO surgical safety checklist)

<table>
<thead>
<tr>
<th>On entering the treatment room – Sign In</th>
<th>Tick</th>
<th>Additional notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient identity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allergies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written consent</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Peritoneoscopic insertion of peritoneal dialysis catheter

Author: DR Peter Topham and Dr Osasuyi Iyasere - Consultant Nephrologists

Approved at Renal Guidelines Meeting September 2019

next review: September 2022
### Cannula
- Antibiotic given
- Bladder emptied

### Monitoring equipment attached and working
- ECG
- BP
- Pulse

### Before Incision – Time out

<table>
<thead>
<tr>
<th>Tick</th>
<th>Additional notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Equipment check
- Exit Site identified
- Any specific patient concerns

### Before returning to ward – Sign out

<table>
<thead>
<tr>
<th>Tick</th>
<th>Additional notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Procedure recorded in notes
- Instrument count correct
- Any equipment issues to address
- Any specific post op concerns

**Debrief Checklist for day case PDI**

<table>
<thead>
<tr>
<th>Patient sticker</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Surgeon**

**Sedationist**

**Assistant**

**Form completed by**

---

**Peritoneoscopic insertion of peritoneal dialysis catheter**

**Author:** DR Peter Topham and Dr Osasuyi Iyasere - Consultant Nephrologists

**Approved at Renal Guidelines Meeting September 2019**

**next review: September 2022**

**NB:** Paper copies of this document may not be most recent version. The definitive version is held on INsite in the Policies and Guidelines Library
<table>
<thead>
<tr>
<th>Equipment problems</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sedation Issues</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Procedural Issues</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Actions required</th>
<th>Name of person responsible for actions</th>
</tr>
</thead>
</table>
Peritoneoscopic insertion of peritoneal dialysis catheter
Author: DR Peter Topham and Dr Osasuyi Iyasere - Consultant Nephrologists
Approved at Renal Guidelines Meeting September 2019
next review: September 2022

NB: Paper copies of this document may not be most recent version. The definitive version is held on INsite in the Policies and Guidelines Library