Haemodialysis catheter: maintenance

The procedures described in this fact sheet are only to be performed by competent dialysis personnel and trainees supervised by competent dialysis personnel, and in conjunction with local procedures.

**Dressing**

**Dressing specification options**

<table>
<thead>
<tr>
<th>Dressing type</th>
<th>Replacement interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transparent, semi-permeable, self-adhesive polyurethane</td>
<td>Weekly*</td>
</tr>
<tr>
<td>Gauze</td>
<td>Every dialysis treatment*</td>
</tr>
<tr>
<td>Chlorhexidine-impregnated</td>
<td>Weekly*</td>
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</tbody>
</table>

*All dressings should be replaced routinely as well as when the dressing becomes damp, loosened, no longer occlusive or adherent, soiled, if there is evidence of inflammation, or excessive accumulation of fluid. Manufacturer’s recommendations should be followed.

**Aseptic technique**

- Hand hygiene
- Sterile dressing pack
- Sterile drape
- Sterile gloves
- Environmental control (pull curtains).

**Sutures/securement devices**

- Suture at insertion site is usually removed at 7-10 days.
- Suture at exit site are usually removed after three weeks, or as per local protocol.
- Sutureless securement device may be used.
- A catheter that has migrated externally should not be readvanced.

**Skin prep for dressing**

- 2% alcoholic chlorhexidine, or 10% povidone iodine with 70% alcohol.
- Cleanse the area (the size of the final dressing) around the catheter including under the hub.
- Cleanse vigorously for at least 30 seconds moving in concentric circles from the site outward. Repeat this step a total of three times using a new swab for each application. Allow to air dry.

**Observe site every haemodialysis treatment for:**

- Erythema
- Pain
- Suture integrity
- Exudate
- Heat
- Catheter position
- Tenderness
- Swelling
- Systemic signs of sepsis.
Accessing the catheter

**Personal protective equipment (PPE)**
- Protective eyewear/face shield
- Apron.

**Antiseptic**
- 1-2% alcoholic chlorhexidine.

**Aseptic technique**
- Hand hygiene
- Sterile dressing pack
- Sterile drape
- New sterile gloves
- Environmental control (pull curtains).

**Accessing the catheter**
- Use two sterile gauze swabs with alcoholic chlorhexidine to meticulously clean the CVC hub and cap; repeat this step at least twice and allow to air dry.
- The catheter lumen should be kept sterile and should never be left open to the air.
- If a cleaned connection site is dropped it should be cleaned again before accessing.

**Needleless access ports**
- Needleless access ports eliminate opening the catheter hub. Use aseptic technique.
- Anytime a needleless access port or cap is removed from a catheter, it should be discarded and a new sterile port or cap should be attached.
- Needleless access ports should be changed:
  - at the frequency recommended by the manufacturer, and:
    - if the integrity of the access port is compromised, or
    - if residual blood remains within the access port.

**Locking of haemodialysis catheters**
- The catheter should be locked by the clinician using the volume of locking solution recommended by the manufacturer (usually printed on the hub or lumen).
- Refer to the full guideline for more information on locking solutions and the locking process.

**Blood culture collection**
- Blood cultures should be collected from a peripheral vessel; or from the catheter in conjunction with a peripheral vessel if trying to determine lumen contamination.
- If dialysing, a specimen can be collected from the arterial port using aseptic technique; or if not dialysing, a specimen can be collected from the catheter lumen post lock aspiration.
- Collect 10mL per bottle.