ANTIBIOTIC LOCK THERAPY POLICY

Written by: Dr Gajee, Consultant Microbiologist

Date: August 2012

Approved by: Drugs & Therapeutics Committee
Date: October 2012
Updated June 2015

Implementation Date: June 2015

For Review: June 2017
Antibiotic lock therapy is indicated for patients with Catheter related blood stream infection involving long-term catheters with no signs of exit site or tunnel infection for whom catheter salvage is the goal.

Antibiotic lock therapy should not be used alone, instead it should be used in conjunction with systemic antimicrobial therapy.

Discuss with the Microbiologist before lock therapy is commenced.

**AGENTS AND CONCENTRATION**

<table>
<thead>
<tr>
<th>AGENT</th>
<th>CONCENTRATION</th>
<th>DILUENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vancomycin</td>
<td>10mg/ml</td>
<td>Na chloride 0.9%</td>
</tr>
<tr>
<td>Teicoplanin</td>
<td>10mg/ml</td>
<td>Na chloride 0.9%</td>
</tr>
<tr>
<td>Gentamicin</td>
<td>5mg/ml</td>
<td>Na chloride 0.9%</td>
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</table>

Addition of heparin is not usually recommended. There is poor evidence of the role of heparin in reducing central venous catheter thrombosis.

**ANTIBIOTIC VOLUMES**

<table>
<thead>
<tr>
<th>TYPE OF CVC CATHETER</th>
<th>VOLUME</th>
</tr>
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<tbody>
<tr>
<td>Picc</td>
<td>1 ml per lumen</td>
</tr>
<tr>
<td>Hickman</td>
<td>2 ml per lumen</td>
</tr>
<tr>
<td>Vascath</td>
<td>2 ml per lumen</td>
</tr>
<tr>
<td>Temporary CVC</td>
<td>0.5ml per lumen</td>
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**WHEN TO REPLACE THE LINE LOCK FLUID**

- Ideally the lock should be left in place for 24 hours
- Dwell time for the lock solution should not exceed 48 hours before reinstallation of lock solution
- The line should not be used between locks but if necessary the lock must be removed before infusion of the next dose of antibiotic, other intravenous medication or solution

**DURATION OF ANTIBIOTIC LOCK THERAPY**
• The duration of therapy has varied substantially between different studies, most studies have used 2-week duration

• If antibiotic lock therapy is used in conjunction with systemic antimicrobial therapy for catheter related blood stream infection – treat for 7-14 days

• For patients with multiple positive catheter-drawn blood cultures that grow coagulase negative staphylococci or gram negative bacilli and concurrent negative peripheral blood cultures, antibiotic lock therapy can be given without systemic therapy for 7-14 days

EXCEPTIONS

• Catheter removal is recommended for catheter related bloodstream infection due to *Staphylococcus aureus*, *Candida* species and resistant gram negatives, instead of treatment with antibiotic lock and catheter retention.

References


3. UCLH – Antibiotic line lock clinical guideline (Local) policy, 2011