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<th><strong>Title:</strong></th>
<th>Umbilical Problems in the Newborn</th>
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UMBILICAL PROBLEMS

Moist Umbilicus

If baby clinically well and no erythema around umbilical base, ensure good hygiene is carried out by mother and monitor closely (clean with sterile water as you would for the eyes). Umbilical swab is not required unless erythema present and then medical staff should be consulted.

Omphalitis

Presentation

Characterized by erythema, induration and a serous or purulent/malodorous discharge from the umbilical stump or periumbilical tissues +/- periumbilical oedema. Infection can spread onto the abdominal wall.

- Term infant onset 5-9 days
- Preterm infant onset 3-5 days.

Urine/stool discharge from the umbilicus is suggestive of underlying anatomical abnormality...refer to paediatrician

Risk Factors

- LBW (<2500g)
- Prior umbilical Catheterisation
- Septic Delivery
- (P)PROM

Micro-organisms causing omphalitis are those normally present in the maternal birth canal

<table>
<thead>
<tr>
<th>Aerobic Bacteria (85%)</th>
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<tr>
<td>Staphylococcus aureus</td>
<td>Bacteriodes fragilis</td>
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<tr>
<td>Coagulase negative Staphylococcus</td>
<td>Peptostreptococcus</td>
</tr>
<tr>
<td>Group A and B Streptococcus</td>
<td>Clostridium Perfringes</td>
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<tr>
<td>E Coli</td>
<td>Clostridium Tetani</td>
</tr>
<tr>
<td>Klebsiella Pneumonia</td>
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<tr>
<td>Proteus Mirabilis</td>
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Complications

- Portal vein thrombosis/Phlebitis
- Septicaemia
- Necrotising fasciitis
- Myonecrosis

Investigations

- Full blood count and differential, CRP
- Blood culture
- Umbilical swab
- Muscle sample if myonecrosis is suspected (discuss with consultant paediatrician)
- AXR at discretion of senior doctor (?intra-abdominal wall gas) +/- USS

Recommended Therapy

Prevention

Dry cord care.

Fold the nappy down below the umbilicus.

Treatment

IV Flucloxacillin 50mg/kg/

   Infants <7 days: 12hrly
   Infants 7-21 days: 8hrly
   Infants >21 days: 6hrly

NB

For more extensive erythema or swelling, refer to paediatrics: many will merit nursery admission and additional broad spectrum antibiotics (eg cephalosporin or gentamicin). (see BNFc). IF IN DOUBT, SEEK SENIOR OPINION.

Necrotising fasciitis, septicaemia and death are rare complications of omphalitis: all babies with omphalitis need close monitoring, and failure to improve or worsening skin/abdominal wall changes or physiological instability
may indicate the need for escalating care. Surgery is required for necrotizing fasciitis.

**Umbilical Granulomas**

The umbilical cord usually dries and separates within 6-8 days.

An umbilical granuloma is an overgrowth of tissue during the healing process of the umbilicus. It usually looks like a soft pink or red lump and often is wet or leaks small amounts of clear or yellow fluid. It is most common in the first few weeks of a baby’s life. Persistence of exuberant granulation tissue at the base of the umbilicus is common. May granulate spontaneously.

**Silver Nitrate Cautery**

***This procedure must be explained clearly to parents, including side-effects (eg chemical burn to skin)***

***Must be performed by trained staff only***

- Ensure no surrounding infection
- Ensure the granuloma is not part of omphalomesenteric duct or urachus. Profuse serosanguinous secretions and bright red exuberance. If in doubt, ask for a senior doctor’s opinion
- Dry area with cotton swab
- Place Vaseline covering around the umbilical area
- Gently cauterise the granuloma
- Explain the follow-up to parents, i.e. occasionally repeat treatment may be required
References:

- BestBets Evidence Based source for management of umbilical granuloma (2013)
- Kapellen TM, Gebauer CM, Brosteanu O, et al. Higher rate of cord-related adverse events in neonates with dry umbilical cord care compared to chlorhexidine powder. Results of a randomized controlled study to compare efficacy and safety of chlorhexidine powder versus dry care in umbilical cord care of the newborn. Neonatology. 2009;96(1):13-8