Care of Burns in Scotland
National Managed Clinical Network

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Paediatric Guideline - Infection Management

Reviewed November 2023 by Mr D McGill, Consultant Plastic Surgeon, NHS Greater Glasgow and Clyde with members of the COBIS Steering Group.

NOTE
This guideline is not intended to be construed or to serve as a standard of care. Standards of care are determined on the basis of all clinical data available for an individual case and are subject to change as scientific knowledge and technology advance and patterns of care evolve. Adherence to guideline recommendations will not ensure a successful outcome in every case, nor should they be construed as including all proper methods of care or excluding other acceptable methods of care aimed at the same results. The ultimate judgement must be made by the appropriate healthcare professional(s) responsible for clinical decisions regarding a particular clinical procedure or treatment plan. This judgement should only be arrived at following discussion of the options with the patient, covering the diagnostic and treatment choices available. It is advised, however, that significant departures from the national guideline or any local guidelines derived from it should be fully documented in the patient's case notes at the time the relevant decision is taken.

Infection management guidelines in paediatric burn patients

The keys to good Infection Management in burns are:

- Obtain wound swabs from all burns.
- Keep the burn surface clean with frequent dressing changes and topical antimicrobial agents which have been applied as appropriate.
- Early recognition of clinical bacteriological invasion with prompt appropriate antibiotic management.
- Close and regular liaison with Microbiology team.
- Recognition that all invasive support measures significantly increase the risk of invasive infection (eg lines, ET tubes, urinary catheters).
- To minimise the duration of invasive support.
- To ensure that the burn surface is covered and healed as quickly as possible.
- Early establishment of enteral feeding where appropriate
- If in place, ensure that enteral feeding and calorie input is maintained as far as possible on surgery days.
- For burn injured outpatients, there should be clear documentation of discussion on signs and symptoms of Toxic Shock.

Common infective scenarios

Early chest infection

- This occurs most commonly in patients who are intubated and have a burn which involves the nose and mouth.
- It frequently becomes a problem within the first 24 to 48 hours.
- The usual organisms are the common nasopharyngeal organisms:
    - Haemophilus
    - Pneumococcus
    - Moraxella
- To date these organisms have been fully sensitive to co-amoxiclav.

Early wound infection

If concerned about Toxic Shock please refer to guidance and treatment algorithms from the British Medical Journal- Best Practice. Search for ‘Toxic Shock Syndrome’ on bestpractice.bmj.com.

If you are concerned about the appearance of the burn in a well child:

1. Deroof blisters and debride loose skin.
2. Cleanse with warmed normal saline or tap water.
3. Obtain wound swabs.
4. Consider a referral to plastic surgeons/ burn unit and the need for debridement in theatre.
5. Ideally use an anti-microbial dressing, unless not immediately available.
6. Consider the need for antibiotic therapy. If required the common treatments would be flucloxacillin or co-amoxiclav.
7. Make sure that the child is followed-up within 24-48 hours.
8. Document discussion on signs and symptoms of Toxic Shock.

If you have an unwell child with a burn injury:

1. A-E assessment of the unwell child as per local and national guidelines
2. Administer fluid resuscitation as required.
3. Obtain blood sample for culture and full blood panel/ investigations.
4. Commence antibiotic therapy
5. Early discussion regarding further management and transfer to burn unit.

Infection beyond 3 days

1. Be aware of pseudomonas.
2. Be guided by burn wound swab results.
3. Ensure that all specimens sent to Microbiology indicate this is a burn patient.
4. Consult with Microbiology team.

Reference

British Medical Journal- Best Practice
Page title: Toxic shock syndrome
https://bestpractice.bmj.com/