Microbiology Fact Sheet

This Fact Sheet is intended as a guide only and does not equate to expert opinion. Interpretation of results should always be taken in context with the patient’s current condition and clinical review.

Wound swab MC&S – interpretation of results

- Wound swab for microscopy, culture and susceptibility (MC&S) testing is used to assist in the detection of a wound infection.
- Normal skin and therefore skin wounds, have a mixture of different bacteria which are often harmless and do not require treatment, this is called colonisation.
- It is important to think carefully about the likely significance of the results of cultures from wound swabs to avoid over-treating patients with antibiotics; you do not have to treat everything that is cultured.

Microscopy

- If there is a high white cell, polymorph or pus cell count, ++ or ++++, this suggests a wound infection may be present.
- If ++ or +++ Gram negative or Gram positive bacteria are seen on microscopy, there is more likely to be a true infection.

Culture

- If there is a colony count of >10⁶/L, ++ or +++ of a bacteria, this is more likely to be a true infection.
- Growth of more than one bacteria species suggests possible contamination.
- Common bacteria likely to cause wound infections include: Staphylococcus aureus, Streptococcus pyogenes and Clostridium perfringens.

Susceptibility

- If the patient is receiving an antibiotic to which the bacteria are reported as resistant (R) or intermediate (I), this may need to be changed to treatment to which the bacteria are reported as susceptible (S).
- If there is more than one antibiotic to which the bacteria are reported as susceptible (S), the patient should be prescribed the one with the narrowest spectrum.

Note:

Good wound and skin care is critical: the decision to treat a wound infection with antibiotics should be made on clinical grounds, not based on the results of a wound swab. Antibiotic treatment may be needed for an infection which is spreading into surrounding skin (suggested by redness, heat, swelling) or where systemic symptoms are present, e.g. fever.

Good blood supply is required for wound healing: referral to a vascular surgeon may need to be considered for non-healing wounds.