

## Necrotising Soft Tissue Infections in Adults - Microbiology Summary Clinical Guideline

Reference number: CG-ANTI/2019/068

### Differential diagnosis

- Symptoms (e.g. crescendo pain), signs (e.g. haemorrhagic bullae, crepitus), sepsis, or septic shock raising the differential diagnosis of necrotising soft tissue infection



### Diagnosis

- Immediate collaboration with the relevant surgical registrar/consultant on call
- If surgery suspects necrotising soft tissue infection, surgical intervention is the overriding priority
- Time is tissue: NCEPOD code 1 (immediate lifesaving/limb or organ-saving intervention within 30 minutes)



### Pre-operative investigation and treatment

- FBC, CRP, lactate, U&E, LFT. Aspartate aminotransferase or creatine kinase
- Blood cultures x 2-3. MRSA screen
- Empiric antibiotics within 1 hour:
  - First line: piperacillin tazobactam 4.5 g 8 hourly and clindamycin\* 1.2 g 6 hourly dual therapy
    - If clinical concerns re the risk of MRSA, add teicoplanin 6 mg/kg (round up to the nearest 200 mg) intravenously 12 hourly for first 24 hours, 6 mg/kg intravenously 24 hourly thereafter, target pre dose level 15-30 mg/l
  - Second line, [if non-immediate without systemic involvement penicillin allergy](#): meropenem 1 g 8 hourly and clindamycin\* 1.2 g 6 hourly dual therapy
    - If clinical concerns re the risk of MRSA, add teicoplanin
  - Third line, [if immediate rapidly evolving or non-immediate with systemic involvement penicillin allergy](#): metronidazole 500 mg 8 hourly and ciprofloxacin 400 mg 12 hourly and linezolid 600 mg 12 hourly triple therapy
- \* Clindamycin for 48 hours from the last return to theatre for debridement. Clindamycin thereafter requires consultation with the microbiology consultant on clinical duty



### Intra-operative and post-operative investigation and treatment

- Surgical exploration ± debridement ± amputation. Return to theatre ≤ 24 hours after the first surgical intervention for re-inspection. Return to theatre 24-48 hourly thereafter, until the surgical team are satisfied that no necrotic soft tissue remains
- Multiple fluid (≥ 1 ml), pus (≥ 1 ml), and/or tissues (~0.5 - 1 cm<sup>3</sup>) in universal containers for MC&S
- Post-operative transfer to ICU
- Early consultation with both plastic surgery (regarding reconstruction) and tissue viability

## References

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## Document control

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