**Guidance on management of proven or suspected *Staphylococcus aureus* bacteraemia (SAB)**

### Initial management
- Communicate result to attending clinical team by phone, agree provisional management plan and advise clinical team to review patient.
- Arrange consultation and documentation of clinical management plan within 24-48 hours and discuss case with patient’s consultant or registrar.
- Identify primary source of infection and remove or drain infected foci.
- If SAB clinically suspected start empirical IV antibiotic therapy following local policy.
- Repeat blood cultures 48-96 hours after start of antibiotic therapy.

#### Septic arthritis or Osteomyelitis
- MRI scan ± Joint aspiration for culture
- If poor response consider Osteomyelitis

#### SSTU SS/G Infected ULCER
- IV device
- Remove device
- Repeat BC negative and no symptoms

#### IV device
- Source unknown
- TTE negative, repeat BC negative and no symptoms
- No ongoing concern regarding underlying source

#### Source unknown
- Infective endocarditis
- Treat as per local/BSAC guidelines

### Further management
- Contact Infection Prevention and Control Team to provide advice to ward staff and conduct SAB investigation.
- Daily review by attending clinical team.
- Review by infection specialist at least once during course of therapy.

### Echocardiography
- Discuss transthoracic echocardiogram (TTE) with a cardiologist for all patients with SAB while the patient is receiving IV anti-staphylococcal therapy.
- Consider transoesophageal echocardiogram (TOE) in patients at high risk of endocarditis — nosocomial SAB, persistent bacteraemia > 4 days, permanent intra-cardiac device, TTE negative AND repeat BC positive, source unknown.

### Empirical antibiotic therapy
- Clinical risk assessment to determine likelihood of MRSA.
- Consider previous MRSA, admission from residential care, wound or indwelling vascular device, community or healthcare-acquired infection.
- Risk assessment **negative**, treat as MSSA - IV flucloxacillin 2g 4-6 hourly
- Risk assessment **positive**, treat as MRSA - local vancomycin protocol
- Penicillin allergy — vancomycin first line for MSSA and MRSA.
- If intolerance, vancomycin allergy, treatment failure or clinical concerns discuss alternative therapy with infection specialist.

### Vancomycin therapy
- Aim for trough of 15-20mg/L for pulsed infusions and consider reducing dosage interval to achieve this level. Aim for trough of 20-25mg/L if using continuous infusion.
- Vancomycin MIC testing by E-test recommended.
- If MIC > 1.0 mg/L by E-test and patient not responding switch to alternative antibiotic and continue search for underlying focus.

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**Guidance developed by the Scottish Antimicrobial Prescribing Group in collaboration with the Scottish Microbiology Forum.**