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

Staphylococcus aureus bacteraemia suspected or identified in the laboratory

CLINICAL TEAM INITIAL MANAGEMENT

- Ensure prompt prescription and administration of empirical IV antibiotic therapy
- If NEWS ≥ 5, complete Sepsis 6 bundle
- Consider further microbiology samples (e.g. urine, pus, sputum, prosthetic material)
- Consider risk factors: recent hospitalisation, surgery, vascular device, person who injects drugs (PWID), haemodialysis, or previous SAB
- Discuss with patient's consultant and consider early infection specialist review
- Ensure clinical management plan is documented in notes
- Discuss all patients with complex/ deep seated/ device-related or persistent SABs, Endocarditis and all PWIDs with an infection specialist
- If SAB is healthcare associated discuss with Infection Prevention Control team regarding need for a root cause analysis and consider duty of candour

FURTHER CLINICAL MANAGEMENT

EXAMINE AND INVESTIGATE TO IDENTIFY SOURCE OF SAB
Vascular device, Skin/Soft tissue/Wound, Septic arthritis, Osteomyelitis, Discitis, Endocarditis, Prosthesis, Infected DVT/septic thrombophlebitis, Pneumonia

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SOURCE CONTROL
Remove infected IV device, involve appropriate surgical specialist to remove drain collections, wash out joints etc.

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TRANS THORACIC ECHO (TTE) IN ALL PATIENTS
Consider trans-oesophageal echocardiogram (TOE) if TTE negative and prosthetic valve or higher suspicion of endocarditis

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REPEAT BLOOD CULTURES 48-96 hours after starting IV antibiotics

ANTIBIOTIC TREATMENT

MINIMUM 2 WEEKS IV FLUCLOXACILLIN
(or IV Vancomycin if true allergy or MRSA)

IV FLUCLOXACILLIN is more effective than IV VANCOMYCIN in flucloxacillin-sensitive SAB

- MRSA accounts for <10% of all SABs in Scotland
- IV FLUCLOXACILLIN 2g 6 hourly (consider dose reduction only if Cr Cl < 10 mls/min) or 4-6 hourly if treating Endocarditis as per local policy
- If known MRSA carrier or previous MRSA infection use IV VANCOMYCIN but consider adding IV FLUCLOXACILLIN pending sensitivity results.
- Use IV VANCOMYCIN first line if assessed as true Penicillin allergy
- IV VANCOMYCIN dosing
  - Intermittent (pulsed) infusions: trough of 15-20 mg/L
  - Continuous infusion: steady state concentration of 20-25 mg/L

INFECTION SPECIALIST ROLE (ID physician or clinical microbiologist)

- Advice on further investigation (imaging/need for TOE) and source control
- Advice on therapy duration and need for/selection of ongoing oral therapy or OPAT
- Any antibiotic-related adverse events or failure to respond to treatment

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