Healthcare Improvement Scotland | SAPG Safeguarding antibiotics

NHS SCOTLAND

Staphylococcus aureus bacteraemia (SAB) clinical management quality indicators

Indicator	**Documented evidence in patient record**	**Rationale/evidence for indicator**
Source of SAB Is the confirmed or likely source documented or is there a clearly documented plan of investigation?	Source of infection documented: skin, wound infection, IV line, endocarditis, spinal infection, deep abscess, respiratory tract, septic arthritis, other **OR** Unknown source and plan of investigation clearly recorded; includes clinical examination of skin, heart sounds, respiratory system, abdomen and musculoskeletal system (joints and spine) **AND** Documentation of further planned investigations including imaging (e.g. MRI, CT, USS, ECHO) or specialist (surgical) review	Site of infection determines duration of therapy, need for surgical intervention and prognosis. Relapse in SAB is predicted by an unidentified or inadequately managed deep source [1-6]
Antibiotic therapy Is the patient receiving appropriate IV antibiotic therapy (based on the organism sensitivities and likely source of infection) at time of SAB review?	If MSSA and no penicillin allergy: IV Flucloxacillin 2g 4-6 hourly (reduced to 1g 6 hourly if documented evidence of renal impairment). If MRSA or MSSA and penicillin allergy: Vancomycin as per local guidelines	IV therapy is standard of care for SAB for at least the first 14 days of therapy. Site/source of infection determines duration of therapy and potential for IV to oral switch. IV therapy should therefore continue until the source and severity of the infection is determined and for at least for 14 days. Flucloxacillin is more effective than glycopeptides in sensitive organisms and therefore is the preferred antibiotic [1,2,7,8]
Vascular device If vascular line-related SAB has the IV catheter(s) been removed?	Documentation of line removal in medical record **OR** documentation of reason for line retention	Not removing an infected IV device is a strong predictor of SAB relapse [6,9,10]
Infection specialist Has an infection specialist reviewed the patient?	Case record documentation of review by or telephone advice from a microbiologist or infectious diseases physician	Review by an infection specialist has been associated with more appropriate investigation, treatment and improved outcome in patients with SAB [6]

References

1. Thwaites GE, Edgeworth JD, Gkrani-Klostas E et al. Clinical management of SAB. Lancet Inf Dis 2011; 11: 208-222
2. Gould FK, Brindle R, Chadwick PR et al. Guidelines (2008) for the prophylaxis and treatment of methicillin-resistant Staphylococcus aureus (MRSA) infections in the United Kingdom, Journal of Antimicrobial Chemotherapy (2009) 63,849–861
3. Fernandez Guerrero ML, Gonzalez-Lopez JJ, Goyenechea A et al. Endocarditis caused by Staphylococcus aureus: a reappraisal of the epidemiologic, clinical and pathologic manifestations with analysis of factors determining outcome. Medicine (Baltimore) 2009; 88:1-22
4. Bradbury T, Fehring TK, Taunton M et al. The fate of acute MRSA periprosthetic knee infections treated by open debridement and retentionof components. J Arthroplasty 2009; 24 (6 suppl) 101-104
5. Davis JS. Management of bone and joint infections due to Staphylococcus aureus. Int Med J 2005; 35 (suppl 2): S79-96
6. Fowler VG Jr, Sanders LL, Sexton DJ et al. Outcome of SAB according to compliance with recommendations of infectious diseases specialists: experience with 244 patients. Clin Infect Dis 1998; 27: 478-86
7. Fortun J, Navas E, Martinez-Beltran J et al. Short course therapy for right sided endocarditis due to Staphylococcus aureus in drug abusers: cloxaciillin versus glycopeptides in combination with gentamicin. Clin Infect Dis 2001; 33: 120-25
8. Fortun J, Perez-Molina JA, Anon MT et al. Right sided endocarditis caused by Staphylococcus aureus in drug abusers. Antimicrob Ag Chemother 1995; 39: 525-28
9. Jensen AG, Wachmann CH, Esperson F et al. Treatment and outcome of SAB: a prospective study of 278 cases. Arch Intern Med 2003; 163:2006-72
10. Johnson LB, Almoujahed MO, Ilg K et al. SAB: compliance with standard treatment, long term outcome and predictors of relapse. Scan J Infect Dis 2003; 35: 782-89

July 2019 For review July 2022

Indicators shaded green are collected via the national enhanced SAB surveillance programme