

Management of *Staphylococcus aureus* bacteremia in adults

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■ Cite as: *CMAJ* 2019 September 3;191:E967. doi: 10.1503/cmaj.190363

1 Cases in which a blood culture grows *Staphylococcus aureus* should always be treated as a true bloodstream infection

Staphylococcus aureus bacteremia is associated with substantial mortality and complications, including endocarditis and metastatic infection requiring specific investigations and treatment.¹ Given the potential for substantial mortality and morbidity, patients with growth of *S. aureus* in blood culture should always be treated.¹

2 Expert consultation is suggested for all patients with *S. aureus* bacteremia

In observational and quasi-experimental studies, consultation with infectious disease specialists improved the quality of care in patients with *S. aureus* bacteremia, including early source control, follow-up blood culture, echocardiography, and appropriate choice and duration of antibiotic therapy.¹ These measures decrease mortality and facilitate earlier discharge.¹

3 Initial antibiotic therapy for *S. aureus* bacteremia should be intravenous and tailored to susceptibility once known

Vancomycin can be used as empiric therapy before susceptibility is known and as definitive therapy for methicillin-resistant *S. aureus*.² Definitive therapy for methicillin-susceptible *S. aureus* should be cefazolin or an antistaphylococcal penicillin.^{2,3} Evidence supporting oral antibiotic therapy is currently limited.

4 All patients with *S. aureus* bacteremia should undergo thorough evaluation for infectious source and secondary infectious foci

About 10%–20% of patients with *S. aureus* bacteremia have infective endocarditis.⁴ All patients with *S. aureus* bacteremia should undergo echocardiography, because the presence of endocarditis has therapeutic and diagnostic implications including consideration for surgery.^{4,5} Patients at high risk (i.e., those with embolic events, pacemakers, prior endocarditis, prosthetic valves or intravenous drug use) need transesophageal echocardiography to exclude endocarditis.⁴

5 Patients with *S. aureus* bacteremia should be treated with at least 2 weeks of antibiotic therapy

According to consensus guidelines, patients with uncomplicated *S. aureus* bacteremia (Box 1) may be treated with 2 weeks of antibiotic therapy.⁵ All other patients should be treated with at least 4 weeks of antibiotic therapy.⁵

Box 1: Criteria for uncomplicated bacteremia⁵

Patients have uncomplicated bacteremia if they satisfy all of the following:

- Exclusion of endocarditis
- No implanted prostheses
- Repeat blood cultures (2–4 d after initial set) give negative results
- Defervescence within 72 hours of appropriate antibiotic therapy
- No evidence of metastatic infectious foci

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Competing interests: None declared.

This article has been peer reviewed.

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