

## EMPIRIC CHOICE

- ✦ vancomycin 15 mg/kg iv q12h (targeting ~15ug/mL trough)
- ✦ cloxacillin 2 g iv q4h if known MSSA or patient known to be MRSA-negative

## DURATION

- ✦ 14 days minimum. The decision to treat for longer is controversial. We currently recommend 28 days unless a TTE is normal OR a TEE is negative for infective endocarditis.

## ALTERNATIVES FOR ALLERGIES

- ✦ vancomycin
- ✦ daptomycin (if cannot administer  $\beta$ -lactam and vancomycin)

## CURRENT RESISTANCE ISSUES

- ✦ Approximately 25% of community-acquired isolates of *S. aureus* are methicillin-resistant. MRSA bacteremia is uncommonly acquired in hospitalized patients at MSH and UHN who are known to be MRSA-negative.
- ✦ Patients with MRSA bacteremia with a high-vancomycin MIC ( $\geq 2$  ug/mL) should be referred to ID. They are associated with worse clinical outcomes/higher failure rates than patients with a low MIC. In addition, patients with MSSA with a high-vancomycin MIC are also associated with worse clinical outcomes, even when treated with  $\beta$ -lactams. Additionally, no drug has been shown to be superior to vancomycin for MRSA.

## IMMUNOCOMPROMISED HOST CONSIDERATION

- ✦ None relevant

## ADDITIONAL DIAGNOSTIC AND THERAPEUTIC COMMENTS

- ✦ ID consultation is strongly recommended in most situations (ID is always notified of blood cultures growing *S. aureus*).
- ✦ If line-associated, the venous catheter should be removed.
- ✦ Repeat blood cultures at 48h to demonstrate sterilization of blood.
- ✦ Patients on vancomycin should have Therapeutic Drug Monitoring (TDM) instituted.
- ✦ Approximately 20% of catheter-associated SAB is associated with infective endocarditis.
- ✦ Daptomycin should be considered if patients are failing vancomycin therapy.
- ✦ We do not recommend use of a second agent (e.g. aminoglycoside or rifampin) for SAB

## REFERENCES:

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2. van Hal SJ, Lodise TP, Paterson DL. The clinical significance of vancomycin minimum inhibitory concentration in Staphylococcus aureus infections: a systematic review and meta-analysis. *Clin Infect Dis.* 2012;**54**(6):755-71.
3. van Hal SJ, Jensen SO, Vaska VL, Espedido BA, Paterson DL, Gosbell IB. Predictors of mortality in Staphylococcus aureus Bacteremia. *Clin Microbiol Rev.* 2012;**25**(2):362-86.
4. Liu C, Bayer A, Cosgrove SE, Daum RS, Fridkin SK, Gorwitz RJ, et al. Clinical practice guidelines by the infectious diseases society of America for the treatment of methicillin-resistant Staphylococcus aureus infections in adults and children. *Clin Infect Dis.* 2011;**52**(3):e18-55.

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