How Many Follow-up Blood Cultures for Staphylococcus aureus Are Too Many?
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It is obviously important to treat Staphylococcus aureus sepsis and make sure subsequent blood cultures are negative. But how often are blood cultures needed following a positive blood culture for methicillin-sensitive Staphylococcus or methicillin-resistant Staphylococcus aureus (MRSA) to ensure disorders like endocarditis or osteomyelitis or an infected central line are adequately treated? Carenas-Comfort et al (10.1542/peds.2020-1821) evaluated how many follow-up cultures are needed to demonstrate infection clearance. The authors describe the course of 122 children and teens seen at Texas Children's Hospital in 2018 with positive blood cultures for MSSA and MRSA. They looked at where the infections were occurring, and what co-morbidities might be influencing the duration of bacteremia. The authors findings are extremely interesting to review. Only 16% of patients had their bacteremia last more than 3 or more days, and intermittent positive blood cultures only occurred in 5% of patients with continued positivity seen less than 1% of the time after two days of negative positive cultures.

The authors of this study also suggest that if you do continue to get intermittent positive blood after starting treatment, endocarditis and/or osteomyelitis should rise to the top of your differential diagnosis list. The authors conclude that if your patient looks well and two follow up cultures are negative at 24 and 48 hours, then a third culture is not indicated. Not only will this result in less risk of false-positive blood cultures but also reduce cost from drawing unnecessary additional cultures. Bottle up the information learned in this study-and apply it the next time you have a patient with MSSA or MRSA bacteremia or sepsis.

- Clinical Management of Staphylococcus aureus Bacteremia in Neonates, Children, and Adolescents
- Mupirocin for Staphylococcus aureus Decolonization of Infants in Neonatal Intensive Care Units
- Epidemiology of Methicillin-Resist Staphylococcus aureus Bacteremia in Children
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