Utilization of MRSA nares to guide vancomycin de-escalation in skin and soft tissue infection

Jessica Zagari, John Cao, Sean M. Stainton, Abhimanyu Aggarwal, Nabila Ahmed-Sarwar

Background:

There is limited data on the negative predictive value of methicillin-resistant S*taphylococcus aureus* (MRSA) nares surveillance for skin and soft tissue infections (SSTI) and a notable gap in clinical outcomes following de-escalation of vancomycin

Methods:

A prospective chart review was conducted for hospitalized patients ≥18 years of age with a SSTI initiated empirically on vancomycin. Exclusion criteria included perioperative prophylaxis, hemodialysis, contraindications to vancomycin, prior de-escalation, history of intravenous drug use or necrotizing fasciitis. The primary outcome looked to compare nares surveillance and wound culture results for concordance. The secondary outcome looked to assess clinical outcomes following de-escalation of vancomycin. In those whose vancomycin regimen was de-escalated, the patient was evaluated for 48-hours for signs of clinical deterioration, including signs of systemic inflammatory response syndrome criteria and/or reinitiation of vancomycin due to worsening infection. Chi-square test will be used to analyze the primary outcome. Descriptive statistics will be used to analyze clinical outcomes after de-escalation.

Results:

Of the 73 patients included to date, 29 patients had both MRSA nares and culture results collected. Preliminary analysis has shown a concordance of 82.8% with negative MRSA nares result and non-MRSA culture result (p=0.684). One patient clinically deteriorated due to non-infectious complications after vancomycin de-escalation. We anticipate these interim results to hold true, and study findings should result in a high negative correlation between MRSA nares surveillance and the occurrence of MRSA in SSTIs. Moreover, we expect that discontinuing vancomycin based on negative MRSA nares surveillance results will not adversely affect clinical outcomes. Research is ongoing, finalized results to be presented upon completion.

Conclusion:

Our research lends further support for clinical utility of MRSA nares de-escalation for vancomycin in the majority of patients with SSTIs. This approach has the potential to reduce the duration of vancomycin therapy without negatively impacting clinical outcomes. Research is ongoing, finalized conclusions to be presented upon completion.