Rapidly Available Xpert MRSA/SA BC PCR on Blood Cultures with Medical Microbiologist Case Review Improves Vancomycin Utilization

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INTRODUCTION

- *Staphylococcus aureus* bloodstream infections (BSI) are life-threatening, and are empirically treated with vancomycin.

OBJECTIVE

- To assess the impact of a rapidly available MRSA PCR on the amount and duration of vancomycin use in MSSA BSIs.

METHODS

- In October 2016, the Xpert MRSA/SA BC assay, a PCR to detect MRSA from blood cultures, was implemented at Kelowna General Hospital Regional Microbiology lab, servicing 799 acute care beds from 1 tertiary care and 6 community hospitals.
- The medical microbiologist promptly phoned the most responsible physician with results to streamline antibiotics.
- All unique episodes of MSSA bacteremia in the pre-PCR and post-PCR groups were matched to corresponding vancomycin defined daily doses (DDD) and days of therapy (DOT) in pharmacy records.
- The mean age was 62.6 and 63.6 years in the pre-PCR and post-PCR groups respectively.
- Among all *S. aureus* BSIs, 17% were MRSA BSIs.
- There were 227 (62.7%) and 63 (65.0%) males in the pre-PCR and post-PCR groups respectively.

RESULTS

- Rapidly available MRSA PCR for *S. aureus* bacteremia coupled with medical microbiologist review led to a significant decrease in unnecessary vancomycin use.

CONCLUSIONS

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