EMERGENCE OF COMMUNITY-ASSOCIATED METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) USA300 GENOTYPE AS A MAJOR CAUSE OF HEALTHCARE-ASSOCIATED BLOODSTREAM INFECTIONS

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ABSTRACT

OBJECTIVE

To determine whether the CA-MRSA USA300 genotype is a significant cause of BSI and nosocomial BSI at a large public hospital and to assess risk factors for BSI caused by MRSA USA300.

METHODS

Unselected consecutive MRSA bloodstream isolates were prospectively collected at an urban public hospital. A multiplex typing was used in the field gel electrophoresis (PFGE) for cluster analysis and by multiple PCR for SCCmec element typing as well as a 20-color Luminex-Vancomycin Lactococcin (PVL) detection. Incidence and risk factors for MRSA USA300 were assessed.

RESULTS

132 Cases of MRSA BSI

Incidence: 6.79 per 1000 admissions

DISCUSSION / CONCLUSIONS

Identification of 132 MRSA bloodstream infections over 7.5 months

Antimicrobial Resistance Rates [%]

Risk Factor

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</table>

Multivariate Analysis

Risk Factors for MRSA USA300 BSI

Vanco (300 mg/kg) by infusion every 12 hours for 48 hours for all BSI cases

REFERENCES

1. CDC national database of MRSA PFGE types: PFT USA100−USA800
2. CA cases caused by MRSA USA300 and USA400: PVL, SCCmecI, mostly airway, skin, but also urinary tract infections
3. Limited data on HA/nosocomial infections caused by CA-MRSA