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**Publishing Title: Impact of USA300 Methicillin-Resistant *Staphylococcus aureus* (MRSA) Infections in Clinical Outcomes**

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**Abstract Body: Background:**

Many assumed increased morbidity and mortality would accompany the emergence of MRSA USA300 infections in otherwise healthy people. We evaluated patients with invasive MRSA infections to assess differences in clinical outcomes between USA100 and USA300 infections.

**Methods:**

Population-based surveillance data was used to identify two cohorts of patients, (1) healthcare-associated (onset >3 days post admission or healthcare exposure in prior year) central line bloodstream infections (CLABSI) and (2) community-onset (onset within 3 days of admission) pneumonia (CO-PNEU) during 2005-2007 from 6 US metropolitan areas. Eligible patients, those with isolates confirmed to be USA100 or USA300, had their medical records reviewed. CLABSI cohort was limited to non-dialysis patients. Analyses were performed for each cohort using logistic regression for binary outcomes and survival analysis for time-dependant outcomes.

**Results:**

A total of 283 and 109 patients were included in the CLABSI and CO-PNEU cohort, respectively. USA300 cases were more likely to be IVDU (P=.003, CLABSI; P=.01, CO-PNEU), black (P=.05, CLABSI; P=.004, CO-PNEU), < 45 years of age (P<.001, CLABSI and CO-PNEU) and healthier at admission (Charlson Index [ChI] < 1: P=.04, CLABSI; p=.004, CO-PNEU) than USA100 cases. In multivariate analysis, predictors of MRSA-related death for CLABSI were ChI ≥ 1 (aOR=5.2, P=.01), age >75 years (aOR=2.8, P=.02), ICU stay prior to MRSA culture (aOR=5.4, P=.001), ICU admission post MRSA culture (aOR=4.8, p=.01), and MRSA complications (aOR=3.2, P=.009); and for CO-PNEU was complicated MRSA presentation (aOR=4.3, P=.02). Predictors of prolonged length of stay (PLOS) in multivariate analysis for CLABSI were MRSA complications (P=.01), onset >3 days post admission (p<.001), and USA100 infection (P=.03); and smoking (P=.03) for CO-PNEU.

**Conclusion:**

USA300 MRSA was not associated with death and PLOS among patients with CLABSI or CO-PNEU when controlling for factors such as underlying conditions, age, and ICU stay prior to MRSA culture. Concerns related to increased mortality and morbidity due to USA300 may not be relevant for this population.

**Author****Disclosure****Block:**

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