Central line associated bloodstream infection (CLABSI) caused by S. aureus (Staphylococcus aureus) remains an important cause of hospital mortality. Vancomycin is considered the drug of choice for the treatment of MRSA (Methicillin-resistant S. aureus), although there is some controversy about its efficacy in specimens with higher minimal inhibitory concentration.

In-hospital mortality of S. aureus bacteremia varies from 20% to 47%, and the predictors of mortality in this population are not well understood.

**OBJECTIVE**

To evaluate risk factors for mortality in patients with central line associated bloodstream infection (CLABSI) caused by S. aureus.

**METHODS**

A retrospective cohort of patients aged 18 or older was performed at a major 1000-bed teaching hospital. Investigated variables were age, sex, hypertension, diabetes mellitus, hepatopathy, immunosuppression, methicillin resistance, dialysis, surgery, concomitant infection. Minimal inhibitory concentrations (MIC) were obtained by automated method (VITEK®) and confirmed by E-test for vancomycin when MIC ≥ 1 mg/ml.

**RESULTS**

Forty six cases were included. Mean age was 55 years (range 18 to 90), 52% of patients were male. Methicillin resistant Staphylococcus aureus (MRSA) caused 69.6% of infections. There were no demographic differences between MRSA and Methicillin susceptible Staphylococcus aureus (MSSA) infected patients, as shown in Fig. 1. Data about mortality are shown in Fig. 2.

**CONCLUSION**

Adequate treatment was the only predictor of good outcome in the study population. Although adequate through levels are indicated in current guidelines for successful MRSA treatment, this was not observed in this cohort. Limitation of this study are its retrospective design and small assessed population. Prospective clinical studies might be more adequate to answer this issue.