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P2387 Are beta-lactams a better choice for oxacillmin-susceptible *mecA*-positive *Staphylococcus aureus* treatment?

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Background: Infections due to methicillin-susceptible *Staphylococcus aureus* (MSSA) represent a significant burden to the health care system. β-lactam are considered the first line for treatment of infections caused by MSSA. However, oxacillin-sensible-*mec*A-positive *S. aureus* (*mec*A-positive-MSSA) are being reported with increasing frequency around the world. In this context, the present study evaluated clinical characteristics, treatment and the impact in patient's outcomes of *mec*A-positive-MSSA and compared to MRSA in Brazil south.0

Materials/methods: This study was a retrospective analysis of 41 *S. aureus* collected from patients with pneumonia and bacteremia at a university hospital, during 2015-2016. *mec*A-MSSA and MRSA was defined by automated susceptibility testing (Vitek 2 ® -bioMérieux, Durham, NC) and detectable *mec*A by modified polymerase chain reaction (PCR). Clinical characteristics, antimicrobial treatment and outcomes were evaluated through an active search in medical records.

Results: Forty-one patients, with bacteremia or pneumonia were selected but, three of them were excluded, based on insufficient follow-up. Vancomycin was prescribed for 85% of MRSA and 73% for OS-MRSA. There was an average of 2 to 3 antimicrobial exchanges per treatment. The average therapy time needed to secure the effective eradication of OS-MRSA was about 25 days. There were observer 12 cases of antimicrobial discontinuation among OS-MRSA, 2 of them succeeded and 10 evolved a worsening clinical course, of with 3 showed an improve after the use of broad spectrum antibiotics. For OS-MRSA therapy was replaced by oxacillin for 6 patients and 5 (83%) of these progressed to death-30 days, while linezolid replacement, performed for 4 patients, was successful in 3 (75%) of them. MRSA therapy was performed with vancomycin for 19 (85%) patients, nine (41%) of them evolved to death by sepsis.

Conclusions: All patients in the study received empirical vancomycin therapy in both groups, but for MRSA these was the most used antibiotic. Patients with *mec*A-MSSA treated with β-lactam were more likely to experience clinical failure, unlike those who received broad spectrum antibiotics or that use β-lactam associated with others anti-staphylococcal antimicrobials. Our data suggest that exchanges vancomycin for β-lactam monotherapy for *mec*A-MSSA may place patients at risk for clinical failure.