

# Comparison of in vitro Efficacy of Quinopristin /Dalfopristin, Linezolid and Vancomycin for Methicillin Resistant Staphylococcus Aureus

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## Abstract

**Objectives:** To compare the in vitro activity of quinopristin/dalfopristin, linezolid and vancomycin by determining their minimum inhibitory concentrations (MICs) for methicillin-resistant Staphylococcus aureus (MRSA) isolated from various clinical samples received from LGH, Lahore.

**Study Design :** Comparative Study

**Place and Duration of Study:** Pathology Department, Post Graduate Medical Institute, Lahore from February 2013 to October 2013.

**Methodology:** The MIC of quinopristin/dalfopristin, linezolid and vancomycin for 50 MRSA strains were determined by using E-test strips (AB Biodisk, Biomeurix) and results were interpreted according to clinical and laboratory standards institute (CLSI) guidelines.

**Results:** All the isolates showed 100% susceptibility to linezolid and quinopristin/dalfopristin and currently no resistant strain was found for these drugs. Quinopristin/dalfopristin showed lowest MIC values than Linezolid and vancomycin.

**Conclusion:** The study provided the in vitro information in establishing the role of linezolid and quinopristin/dalfopristin as an alternative to vancomycin for the treatment of serious MRSA infections. It also gives information regarding linezolid and quinopristin/dalfopristin as the best therapeutic option for the treatment of hVISA, VISA and VRSA.

**Key Words:** Methicillin Resistant Staphylococcus aureus, Minimum Inhibitory concentration, Epsilon Test, heteroresistant Vancomycin Intermediate Staphylococcus aureus, Vancomycin Intermediate Staphylococcus aureus, Vancomycin Resistant Staphylococcus aureus, Clinical Laboratory and Standard Institute.