

## **An Update on Linezolid against Methicillin-Resistant Staphylococcus Aureus Clinical Isolates from Pakistan**

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**Abstract :** Objectives: The study aimed to determine the efficacy of linezolid against clinical isolates of methicillin-resistant staphylococcus aureus (MRSA). Methodology: This cross-sectional study was conducted in the microbiology department of Allama Iqbal Medical College Lahore from August 2017 to September 2019. Isolates were confirmed as MRSA via the presence of the mec-A gene. Confirmed MRSA isolates were processed for susceptibility testing against different antimicrobials, especially linezolid, via the disc diffusion method. Zone sizes were interpreted according to CLSI guidelines. Results: Various types of clinical samples were included in the study; however, the highest frequency of MRSA isolates was found in pus samples, followed by other clinical samples. Among hospitalized patients, most MRSA isolates were obtained from patients in the surgical ward. Of 243 mec-A gene detected isolates, Vancomycin and linezolid showed 100% susceptibility, chloramphenicol showed declining resistance 78 (32.09%), and emerging sensitivity 165 (67.90%) against MRSA. Conclusion: Linezolid is a very efficient drug against MRSA, but the use of this novel drug must be conserved for vancomycin-resistant Staphylococcus aureus or when more resistant pathogens are suspected.

**Keywords :** MRSA, chloramphenicol, linezolid, nosocomial infections

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