

Abstract

# The Prevalence and Antibiotic Resistance Methicillin-Resistant *Staphylococcus aureus* (MRSA) Recovered from Adult Urinary Tract Infections in Zakho City, Kurdistan-Iraq <sup>†</sup>

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Urinary tract infections (UTIs) are one of the most common bacterial infections in adults. The prevalent problem and emergence of methicillin-resistant *Staphylococcus aureus* (MRSA) among adult urinary tract pathogens has been recently reported. Thus, this study is undertaken to identify the MRSA along with their antimicrobial susceptibility pattern as well to detect *mecA* genes among out-patients adults diagnosed with UTIs in Zakho city, Kurdistan-Iraq. A total of 27 *Staphylococcus aureus* isolates were recovered from 330 urine samples with UTIs aged (18–60 years) and collected from Zakho General Teaching Hospital in Zakho City, between August 2021 and the end of February 2022. Antimicrobial sensitivity patterns were determined by the Kirby Bauer disc diffusion method as well all of these isolates were screened for the presence of *nuc* and *mecA* genes using polymerase chain reaction. The proportions of infected females (81%) were significantly higher than male and all these isolates were confirmed to presence both *nuc* and *mecA* genes. Roughly all *S. aureus* were resistant to both ampicillin and erythromycin. Additionally, around 85% of *S. aureus* were resistant to vancomycin, cloxacillin, and tetracycline whereas around ¾ were resistant to trimethoprim and oxacillin. This study shows the prevalence of MRSA isolates from adult patients with suspected UTIs and imipenem was the most effective antibiotic (about 90%) against to these bacteria.

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