

## Antimicrobial susceptibility pattern of *Staphylococcus aureus* strains isolated from hospitalized patients in Tehran, Iran

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**Background and Aims:** *Staphylococcus aureus* is a major bacterial pathogen that causes different community- and hospital-acquired infections. Over time, strains of *S. aureus* have become resistant to different antibiotics including penicillinase-resistant penicillins. Having data on the local antimicrobial susceptibility pattern of this pathogen is necessary for selection of appropriate antibiotics for empirical treatment of infections due to it.

**Methods:** To determine the antimicrobial susceptibility pattern of *Staphylococcus aureus* strains isolated from hospitalized patients in Tehran, Iran. In a prospective cross-sectional study performed at Imam Khomeini Hospital, samples were collected from hospitalized patients and were cultured. All positive cultures which yielded *S. aureus* underwent antimicrobial susceptibility testing using the Kirby-Bauer disk diffusion method on Mueller Hinton agar. The results were interpreted after 24 hours of incubation at 37 °C.

**Results:** A total of 160 clinical isolates of *S. aureus* were collected. Most isolates were obtained from blood (29%). The overall susceptibility of isolated *S. aureus* strains to antimicrobial agents was 100% for vancomycin, 49.4% for amikacin, 43.8% for gentamicin, 36.8% for co-trimoxazole and tetracycline, 36.3% for cefazolin, 30.6% for cephalexin, 24.4% for oxacillin, 23.8% for erythromycin, and 3.1% for penicillin.

**Conclusions:** Other than vancomycin, none of the tested antibiotics are appropriate for empirical treatment of serious *S. aureus* infections in our area. Full text of this abstract is published in the "Iranian Journal of Pharmaceutical Sciences" and is available online.

**Keywords:** Antimicrobials; Resistance; *Staphylococcus aureus*; Susceptibility