

The Prevalence of TSST-1 Producing Clinical Isolates of *Staphylococcus Aureus* Strains Isolated from Emam Reza Hospital in Tabriz, Iran

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Background & Objectives: *Staphylococcus aureus* is one of the most important etiological agent of hospital and community acquired infections. The enterotoxins and toxin shock syndrom toxin (TSST-1) are among the most common pathogenic determinants elaborated by this bacterium. They are also well-known for their super-antigenic properties and are commonly referred to as pyrogenic toxins super antigens (PTSAgs) which exert deep influences in their host. Infections caused by drug-resistant *S. aureus* strains, mostly of hospital origin, are rapidly on the rise in many parts of the world. The incidence of TSST-1 elaborating strains are also very alarming. The aim of this investigation was to survey the prevalence of TSST-1 gene in the clinical isolates of *S. aureus* recovered from hospitalized patients in Shohada hospital of Tabriz, Iran.

Methods: During one year period, a total of 11353 clinical specimens, obtained from hospitalized patients were subjected to bacterial culture. Strains of *Staphylococcus aureus* were recovered and identified by routine bacteriological methodologies. Their antibiotic susceptibility patterns were determined by agar disk diffusion methods. Following genomic DNA extraction by boiling methods, the presence of TSST-1 gene was analysed by PCR.

Results: A total 84 *S. aureus* isolates were recovered (0.73%). Antibiogram results indicated that all of the isolates were sensitive to linzolid; whereas, only 83.3% were resistant to meticillin. The prevalence rate of TSST-1 gene in the isolates were found to be 14.2%.

Conclusion: The relatively high prevalence of TSST-1 gene in the clinically recovered *S. aureus* strains in Tabriz area and their circulation in the community can have a potentially alarming influence in the general health of community as well as in hospitalized patients.

Keywords: *Staphylococcus aureus*; TSST-1; Antibiotic Resistance; PCR