Determination of the Rate of Methicillin Resistant and Enterotoxigenic Staphylococcus Aureus in Different Kinds of Creamy Pastries Sold in Pastry Shops in Urmia

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Background & Objectives: *Staphylococcus aureus* is a one of the most frequent causes of food poisoning all over the world. Staphylococcal food poisoning is caused by entrotoxins produced by this bacterium during its growth in contaminated foods. Many of *Staphylococcus aureus* strains are methicillin resistant; these strains usually show high resistances to different classes of antibiotics and can cause serious problems in treatment, this study was focused on detection of the presence of entrotoxigenic *S.aureus* and determining the rate of resistance to methicillin among the isolates obtained from creamy pastries in Urmia, Northwest of Iran.

Methods: 100 samples of creamy pastries were collected under sterile conditions via standard methods and were transported to the laboratory. The samples were cultured and identified by routine bacteriological methods as S.aureus isolates. The isolated bacteria were evaluated by SET-RPLA KIT TOXIN DETECTION KIT in order to detection of entrotoxigenic isolates. The sensitivity of the isolates to methicillin was determined dy oxacillin disc with disc diffusion methods.

Results: The results indicated that15% of the creamy pastries were contaminated by *S. aureus*, also there is no Significant relationship between the rate of contamination and the kind of pastry ($p>0.05$). All the isolates were sensitive to oxacillin. 40% of the *S. aureus* isolates were entrotoxigenic, which 66.6%, 33.3% and 16.6% produced entrotoxin A, B and D respectively, the isolates showed a high sensitivity to penicillin, rifampin and teicoplanin, also there was no difference between entrotoxigenic and non entrotoxigenic isolates in respect of the sensitivity to antibiotics.

Conclusion: some creamy pastries in Urmia, Northwest of Iran are contaminated by entrotoxigenic *S.aureus*, but methicillin resistant isolates is not spread in creamy pastries in Urmia

Keywords: *Staphylococcus aureus*; Enterotoxin; Creamy Pastries