Investigation of the frequency of Staphylococcus aureus carriers and its methicillin-resistant pattern in Torbat Heydariyeh hospitals staff in 2013

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Abstract

Background & Aim*:* Staphylococcus aureus is one of the main causes of nosocomial infections and plays an important role in making hospital staff sick. This study was aimed to investigate the frequency of Staphylococcus aureus carriers and its methicillin-resistant pattern in Torbat Heydariyeh hospitals staff in 2013.

Methods: This is a descriptive/cross sectional study conducted on 130 hospital staff in Torbat Heydariyeh in 2013. The sampling was done using a sterile swab from anterior nasal of each person. Then, the samples were cultured on mannitol salt agar and identified by Gram staining test. Antibiotic Susceptibility of Staphylococcus strains was determined by Kirby-bauer method. Methicillin-resistant Staphylococcus aureus were identified using oxacillin agar method.

Results: 28 out of 130 cases (21.5%) were nasal carriers of Staphylococcus aureus. Staff of ICU and laboratory had the highest Staphylococcus aurous carriage, while staff working in obstetrics division showed the lowest. Among all studied variables, there was only a significant relationship between age and being a carrier of Staphylococcus aureus. The greatest resistance was observed to penicillin (100%), Glucosaciline (42.9%) and the lowest resistance was observed to cotrimoxazole (5%) antibiotics. In this study, 14 samples (10.8%) were resistant to methicillin by oxacillin agar method.

Conclusion: The results showed that a considerable number of Torbat Heydariyeh hospitals staff are methicillin resistant Staphylococcus aureus carriers. Thus, detection and treatment of these carriers plays an important role in incidence rate of methicillin resistant Staphylococcus aureus. Moreover, it is recommended to perform periodic screening to control this agent.

Key words: Staphylococcus aureus, methicillin, antibiotic resistance