عنوان مقاله:

Identification of Staphylococcus aureus Enterotoxin Genes of sea, seb and sec among Healthy Carriers in Ardabil City

محل انتشار:

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خلاصه مقاله:

Background and Aims: Staphylococcus aureus is a gram-positive, non-motile, non-spore-forming, aerobic, and facultative anaerobic bacterium, which is colonized in anterior part of the human nasal cavity. The carriers' individuals working in the food industry are the main source of spreading food-borne diseases. Staphylococcal enterotoxins (SEs) are the key virulence factors in the staphylococcal food poisoning (SFP). The aim of this study was to identify the S. aureus enterotoxin genes of sea, seb and sec among healthy carriers. Materials and Methods: In the current descriptive cross-sectional study, ۱۳۶ nasal swab samples were collected from the personnel working at butchers, dairy stores, and fast food restaurants through Ardabil city. The samples were cultured and then confirmed using the biochemical tests. The DNA of S. aureus isolates was extracted to detect sea, seb and sec genes as markers for SEA, SEB and SEC enterotoxins using the PCR method. Results: Among the ۱۳۶ nasal swab samples, ۴۶ (۳۳.۸%) were positive for S. aureus, that were confirmed by the presence of femA gene. Out of ۴۶ isolates, the sea, seb and sec genes were found in ۱۱ (۲۳.۹%), ۶ (۱۳%) and ۵ (۱۰.۸%) isolates, respectively. Conclusions: According to the findings, a significant percentage of the food-chain personnel were nasal carriers of enterotoxigenic S. aureus. Therefore, for prevention and distribution of Staphylococcal infections, screening program and control of such carriers are recommended.

کلمات کلیدی:

Staphylococcus aureus, Enterotoxin, PCR, استافیلوکوکوس اورئوس, انتروتوکسین, PCR