

عنوان مقاله:

Evaluation of Prevalence of Trimethoprim Resistance Genes in Gram Negative Bacilli Isolated from Clinical Specimens of Patients Admitted to the Pars Hospital, Theran

محل انتشار:

مجله بین المللی میکروبیولوژی مولکولی و بالینی، دوره 10، شماره 1 (سال: 1399)

تعداد صفحات اصل مقاله: 8

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خلاصه مقاله:

Trimethoprim is a bacteriostatic and broad-spectrum antibiotic used to treat infections, particularly urinary tract infections. Among dfrA genes, its five genes including dfrA₁, dfrA_Δ, dfrA₁₂ and dfrA₁₇ which release resistance to trimethoprim, are more important. This study tends to evaluate the frequency of encoding trimethoprim resistant genes in clinical specimens. First, clinical specimens were isolated from patients hospitalized in the Pars Hospital and cultured on blood agar and EMB. Differential tests were used to detect and isolate gram negative bacteria. Then, antibiotic sensitivity test was performed by disk diffusion agar method according to CLSI 2018 protocol. After detection of trimethoprim resistant bacteria, genomic DNA was extracted from them. Polymerase chain reaction was performed using dfrA primers to detect the presence of genes producing resistance to trimethoprim. Statistical analysis of results of polymerase chain reaction showed that dfr₁ gene, followed by dfr_Δ and dfr₁₇, was the most frequent among strains of gram negative bacteria in the statistical population. The presence of dfrA genes plays an important role in antibiotic resistance to trimethoprim.

کلمات کلیدی:

Trimetoprime, dfrA, gene, gram negative bacteria, resistant

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