سیویلیکا - ناشر تخصصی مقالات کنفرانس ها و ژورنال ها
گواهی ثبت مقاله در سیویلیکا
CIVILICA.com

عنوان مقاله:

Evaluating Susceptibility of Environmental Isolates of Pseudomonas aeruginosa to Chlorhexidine Gluconate and Aqueous Extract of Peganum harmala

محل انتشار:

فصلنامه زیست پزشکی جرجانی, دوره 9, شماره 3 (سال: 1400)

تعداد صفحات اصل مقاله: 7

نویسندگان:

Elham Hashempour - *Department of Biology, Gorgan Branch, Islamic Azad University, Gorgan, Iran*

Leila Fozouni - *Department of Biology, Gorgan Branch, Islamic Azad University, Gorgan, Iran*

Ania Ahani Azari - *Department of Biology, Gorgan Branch, Islamic Azad University, Gorgan, Iran*

خلاصه مقاله:

BBackground and Objective: Pseudomonas aeruginosa is an important case of nosocomial infections and a major health problem. The increased emergence of resistance to antibiotics and disinfectants among these bacteria, necessitates the production of new antimicrobials with wider activity and low toxicity. This study was carried out to evaluate inhibitory effects of chlorhexidine gluconate and extract of Peganum harmala on multi-drug resistant (MDR) P. aeruginosa. Material and Methods: ۳۹ P. aeruginosa strains were isolated from ۱۱۴ environmental samples. After identifying MDR strains, minimal inhibitory concentration (MIC) of chlorhexidine gluconate (۲۰%) and P. harmala extract against the isolates was determined by broth microdilution method. Results: Overall, ۲۷ (۶۹.۲%) P. aeruginosa isolates resistant to quinolones, aminoglycoside, cephems and carbapenems were reported as MDR strains. The MIC of chlorhexidine gluconate was ≥ ۱۰۰۰µg/ml, which was ۴-fold higher than the MIC of P. harmala extract (MIC=۵۰۰µg/ml). MIC of chlorhexidine gluconate and P. harmala extract against P. aeruginosa isolates differed significantly (P=۰.۰۱). Conclusion: Compared to chlorhexidine gluconate, P. harmala extract has a higher antibacterial effect on MDR P. aeruginosa isolates from environment. Further research is required to verify the efficacy of this plant .extract for disinfection of equipment in clinics and local kitchens

کلمات کلیدی:

Bacterial contamination, Pseudomonas aeruginosa, Peganum, Chlorhexidine gluconate

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/1296021