

عنوان مقاله:

Antibacterial Effects of *Origanum vulgare* Essence Against Multidrug-Resistant *Acinetobacter baumannii* Isolated From Selected Hospitals of Tehran, Iran

محل انتشار:

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تعداد صفحات اصل مقاله: 5

نویسندگان:

Hossein Saghi

Abbas Bahador

Azad Khaledi

Ramazanali Ataee Kachoei

Ferdoes Amiri Dastjerdi

Davoud Esmaeili

خلاصه مقاله:

Background: Infection due to *Acinetobacter baumannii* has become a significant challenge to modern healthcare systems. The rapid emergence and global dissemination of *A. baumannii* as a major nosocomial pathogen is remarkable and it demonstrates its successful adaptation to the 21st century hospital environment. Recent studies have discussed about essential oil of *Origanum vulgare* against a range of bacteria, including various species of *Staphylococcus*, *Pseudomonas*, *Bacillus* and *Escherichia coli*. Objectives: The present study aimed to investigate the inhibitory effects *O. vulgare* essence against multidrug-resistant (MDR) strains of *A. baumannii* from selected hospitals in Tehran, Iran. Materials and Methods: This oil was obtained using the hydrodistillation method and analyzed by gas chromatography mass spectrography (GC/MS). The antimicrobial activity against MDR isolates was achieved using disc diffusion method and macro-broth dilution assay. Results: Analysis of the essential oil revealed the presence of pulegone (68.59%) piperitone (7.8%), piperitenone (7.8%), 1, 8-cineole (1.3%), and carvacrol (1.6%) as the major components. The results showed a significant activity against MDR *A. baumannii* with inhibition zones and minimal inhibitory concentration values in the ranges of 7-15 mm and 20-35 $\mu\text{L/mL}$ respectively. Conclusions: This investigation showed that the essence oil of *O. vulgare* had a potent antimicrobial activity against MDR *A. baumannii*. Further research is required to evaluate the practical values of therapeutic applications.

کلمات کلیدی:

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