

عنوان مقاله:

Chemical composition and antifungal effect of hydroalcoholic extract of *Allium tripedale* (Tvautv.) against *Candida* species

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خلاصه مقاله:

Background and Purpose: Treatment of life-threatening fungal infections caused by *Candida* species has become a major problem. *Candida* spp. are the most important causative agents of candidiasis. *Allium tripedale* is a medicinal plant that has been traditionally used to treat infections. In the present study, we aimed to determine the chemical compounds and antimicrobial activity of hydroalcoholic extract of *A. tripedale* against different species of *Candida*. **Materials and Methods:** Phytochemical analysis was performed to identify the possible bioactive components of this extract by using gas chromatography and mass spectroscopy (GC-MS). The hydroalcoholic extract of *A. tripedale* were collected. Different concentrations of *A. tripedale* (50, 25, 12.5, and 6.25 mg/ml) were used to evaluate its antifungal activity against *Candida* species (*C. albicans*, *C. parapsilosis*, and *C. krusei*) using disk diffusion assay. **Results:** The GC-MS analysis revealed the presence of 40 different phytoconstituents with peak area; the major compounds were tetracosane, hexadecanoic acid, 1-eicosanol, 1,2-dihydro-pyrido[3,2,1-k]phenothiazin-3-one, 2-hexadecen-1-ol, and 3,7,11,15-tetramethyl. Hydroalcoholic extract showed strong antimicrobial activity (inhibition zone 20 mm), moderate antimicrobial activity (inhibition zone < 12-20 mm), and no inhibition (zone < 12 mm). In addition, the hydroalcoholic extract exhibited the highest antimicrobial properties against *C. albicans* strains. **Conclusion:** *A. tripedale* extract had a considerable inhibitory effect against various *Candida* species, but its highest inhibitory effect was against *Candida albicans*. Further investigations are required to detect the performance of this plant in the treatment of *Candida* infection.

کلمات کلیدی:

Allium tripedale, *Candida* species, Candidiasis, GC-MS

