Phytochemical Analysis and Antifungal Activity of Some Medicinal Oil Plants Against Human Pathogens Causing Skin Infections

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Abstract: Phytochemical and antifungal activity of hexane seed extracts of Argemenemexicana, Derris indica and Santalum album against superficial fungal pathogens was investigated. Phytochemical analysis of all seeds extracts was determined by adapting standard methods. Antifungal activity was evaluated by inhibition of spore germination and growth kinetics assay by using standard procedure. Phytochemical screening revealed the presence of steroids, glycosides, flavonoids, alkaloids, and saponins in all the extracts. Exposure of fungal spores to 156, 312, 625, 1250, 2500 and 5000 µg/ml concentration of the oil for a period of 30–180 minutes showed varying degree of inhibition of spore germination. Among the oil tested, A. mexicana seed oil showed 60–80% inhibition of spore germination on 180 min of exposure. A. mexicana seed oil strongly inhibits the members of the T. rubrum and C. albicans than tested with D.indica and S. album seed oil on spore germination and time dependent growth kinetics inhibition of tested microbes. A. mexicana seed oil may use as antifungal drug against human pathogens which cause certain superficial fungal infections of the skin.

Keywords: Medicinal oil plants, phytochemical analysis, antifungal activity, seed extracts.