In Vitro Antifungal Activity of Sertaconazole Nitrate Against Recent Isolates of Onychomycosis Causative Agents

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Topical antifungal treatment of superficial mycoses can have high relapse rates and recurrence after stopping treatment. Onychomycosis is the most common nail disorder in adults, accounting for up to 50% of all nail diseases, especially in adults and the elderly. Candida infections account for 5-10% (Candida albicans and Candida parapsilosis) of all cases of onychomycosis and about 5% of cases are due to non-dermatophyte molds. The most commonly isolated dermatophyte is Trichophyton rubrum, with Scopulariopsis brevicaulis being the most common non-dermatophyte. Epidemiological data indicate a high rate of clinical failure, over 25%, due to problems of nail penetration and retention times of active antifungal concentrations. Antifungal treatment compliance is low (<51%) and many patients require oral therapy in cases of previous clinical failure or extended affected areas involving nail matrix. The aim of this study was to assess the in vitro antifungal activity of sertaconazole nitrate against clinical isolates of onychomycosis-causing agents and to compare this activity to those of amorolfine, cyclopoxolamine, bifonazole, fluconazole and terbinafine. Sertaconazole, an azole derivative, acts by inhibiting ergosterol biosynthesis and damaging cell integrity. It has a broad spectrum of activity against yeasts, dermatophytes as well as Gram-positive bacteria.