

Letter To The Editor

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Antifungal Susceptibility Pattern of Dermatophytes: A Hospital-Based Study

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Sir,

Dermatophytosis is one of the most prevalent superficial fungal infections worldwide, affecting nearly 20–25% of the global population, particularly in tropical and developing countries.^[1] In recent years, increasing reports of treatment failure and recurrence have raised concerns regarding antifungal resistance among dermatophytes, emphasising the need for standardised antifungal susceptibility testing.^[2,3] In this context, we conducted a hospital-based prospective study in a tertiary care centre to evaluate the in vitro antifungal susceptibility patterns of dermatophyte isolates using the Clinical and Laboratory Standards Institute (CLSI) M38-A2 broth microdilution method. A total of 100 clinical samples from skin and nail infections were processed, of which 50 isolates were subjected to antifungal susceptibility testing. The predominant species isolated was *Trichophyton mentagrophytes*, followed by *Trichophyton rubrum* and *Microsporum gypseum*, which is consistent with previous epidemiological studies.^[4,5]

The antifungal susceptibility testing revealed significant variation in the minimum inhibitory concentration (MIC)

values among different antifungal agents. Terbinafine and sertaconazole demonstrated excellent antifungal activity with low MIC ranges (0.06–2 µg/ml and 0.06–1 µg/ml, respectively). Similarly, itraconazole and voriconazole exhibited very low MIC values, indicating strong efficacy against dermatophytes. These findings are in agreement with earlier studies that have highlighted the superior activity of terbinafine and azoles against dermatophytes.^[6,7] In contrast, fluconazole showed relatively higher MIC values (2–64 µg/ml), suggesting reduced susceptibility among isolates. Amphotericin B also demonstrated higher MIC ranges, indicating limited effectiveness. Similar observations have been reported in previous studies, where fluconazole exhibited lower activity against dermatophytes compared to other antifungal agents.^[8,9]

The variability in susceptibility patterns observed in this study highlights the importance of performing antifungal susceptibility testing, particularly in cases of recurrent or non-responsive dermatophytosis. Although standardised methods such as CLSI M38-A2 provide a reliable framework, clinical correlation remains essential for

appropriate therapeutic decision-making.^[10,11] In conclusion, our study emphasises that terbinafine and newer azoles remain the most effective agents against dermatophytes, whereas commonly used drugs such as fluconazole may show reduced efficacy. Routine antifungal susceptibility testing can play a crucial role in guiding appropriate therapy and preventing the emergence of resistance.

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