

Antifungal Susceptibility & Distribution of Dermatormycosis; A Comparative Study of Doon Valley & Haldwani Region Uttarakhand †

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Abstract: Number of Antimycotics is available for several Dermatormycosis & their continuous use makes them drug abuse sometimes, so to evaluate pathogens' current antifungal susceptibility to certain drugs concerning environmental conditions becomes a necessity. To investigate the epidemiological patterns of the susceptibility of any fungal dermatormycosis that may guide to choose the most effective drug susceptibility, it will be useful, especially in states such as Uttarakhand; where mycosis is a major public health issue due to environmental conditions are highly favorable for dermatophytes. At Sushila Tiwari govt hospital Haldwani during the rainy season (from July 2018-Nov2019) collection of skin scrapings was done from tinea patients. The culture was done in the laboratory. MIC was calculated by Disk diffusion & by performing CLSI M38- A2 methodology against all species isolated from govt. Hospital Haldwani. Findings for all three species (*Trichophyton*, *Epidermophyton* & *Micosporum* SPS.) were MIC₉₀ of Itraconazole ranges from 10-120 µg/ml, which is comparatively much higher for Doon species than Haldwani. MIC₉₀ of fluconazole ranges between 0.03-0.5µl, which was almost the same for the species of both the regions Haldwani & Doon. MIC₉₀ for ketoconazole ranges from 8-24µg/ml. MIC₉₀ for Terbinafine ranges from 16-32µg/ml, which is almost the same for Doon as well as Haldwani species. *Trichophyton* & *Rhizopus* *sps.* were more frequent at Doon valley however, *Epidermophyton*, *Micosporum* & *Blastmycosis* *sps.* were more frequent at the Haldwani region. MIC for all the antifungals is comparatively of higher range for Doon valley than Haldwani. A molecular-level modification also indicated by pigment imparts variation in the presence & absence of antifungals may be due to the usage of different metabolic pathways in the presence of antifungals for cell wall synthesis.

Keywords: *Trichophyton*; *Epidermophyton* & *Micosporum*; Minimum inhibitory concentration; Microdilution.

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Conflicts of Interest

The authors declare no conflict of interest.