Methods: This was a hospital-based prospective study conducted in the isolated organisms obtained from clinically suspected cases of dermatophytosis in the patients. Skin, nail, and hair samples of patients suspected with superficial fungal infections were processed for dermatophytes using conventional microbiological methods. NMR-based identification of metabolites was carried out in cell extracts prepared from the culture suspensions of T. mentagrophytes and T. rubrum obtained during the study from a sub-set of the clinical isolates from the samples.

Results: Dermatophytes were isolated in 81.88% (210/259) cases with T. mentagrophytes being isolated in 65% (145/229) of isolates, followed by T. rubrum in 35.5% (90/259) isolates. In NMR study, was done in the standard ATEC strain (T. mentagrophytes ATCC9535) and T. rubrum ATCC20918) and representative clinical isolates of both the species. Overall, 24 metabolites were identified in T. rubrum and 25 metabolites in T. mentagrophytes amongst which 22 metabolites were common to both fungi. However, 4-hydroxyproline and 'acetate' was found specific to T. rubrum, and 'allantoin' was found specific to T. mentagrophytes. These specific metabolites could be useful for early identification of dermatophytes as well early-determination of antifungal susceptibility by using metabolic endophenotypes, further large-scale study will be helpful in the regard.

Conclusion: T. mentagrophytes was the predominant dermatophyte species in the study. Amongst the number of dermatophytes detected in T. rubrum and T. mentagrophytes, '4-hydroxyproline' and 'acetate' was found specific to T. rubrum and 'allantoin' was found specific to T. mentagrophytes. These specific metabolites could be useful for early identification of dermatophytes as well early-determination of antifungal susceptibility by using metabolic endophenotypes, further large-scale study will be helpful in the regard.

P101 Role of biofilm production in recalcitrant tinea

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Poster session I, September 21, 2022, 12:30 PM - 1:30 PM

Objective: To determine the role of biofilm production in dermatophytes from cases of recalcitrant skin lesions of study participants.

Methods: An observational study conducted in UCCMS and GTB Hospital, Delhi, in clinically diagnosed and mycologically confirmed cases of recalcitrant tinea infection of glabrous skin to analyze the role of biofilm production in dermatophytes. After taking written informed consent from the study population sample collection (skin scraping) was done. The scraping was then inoculated in 3% pentamidine hydrochloride (R0H) for direct microscopic examination followed by culture on Sabouraud Dextrose agar (SDA) and 2% chloramphenicol agar (CDA), respectively.

Results: The fungal growth was subjected to PCR using recombinant Taq polymerase. The fungal growth was subjected to PCR using recombinant Taq polymerase. The fungal growth was subjected to PCR using recombinant Taq polymerase.

Conclusion: Five patients developed biofilm formation which was observed in our study.

High rate of in vitro strong biofilm formations by the isolates indicates that these organisms might be forming biofilms in vivo leading to chronicity and poor response to therapy.