to a new investigation with biopsy for direct research and culture for fungi, being identified Prototricha Wirhelomycosis, by Malini- Tirth, with sensitivity to imazalil and amphotericin B. PCR amplification of the genomic material obtained in the clinical isolate was performed with purification of its product, and sequencing showed genetic similarity of 97.46% with Prototricha Wirhelomycosis. The sequence obtained was deposited in Genbank under number MG490534. In the absence of therapeutic response to imazalil (40 mg), and significant worsening of the lesion, with progression of a secondary infection caused by Staphylococcus homoeoliticus, treatment with Clindamycin (900 mg/day for 10 days) and Liposomal Amphotericin B (4 mg/kg) for 45 days was performed. After suspension of Liposomal Amphotericin B, the lesion recurred in 15 days, and voriconazole (200 mg q24 h) was prescribed for 4 months, with complete resolution of the lesions. Currently, he is free of infections, having been followed up every 6 months.

Conclusion: Rare disease caused by chilopothrichiasis may be surprising due to the severity and lack of response to antifungals that show sensitivity in vitro.

P109
Molecular identification of dermatophyte species from Eastern Aaxam, Northeast India
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Poster session I, September 21, 2022, 12:30 PM - 1:30 PM

Objective: Dermatomycosis infections occur worldwide both in developed as well as developing countries. However, species of dermatophytes may vary in many parts of the world. This study was done to know the various species of dermatophytes that are commonly associated with infection in this part of the country.

Methods: This study was done from 2020-2021. A total of 98 consecutive isolates of dermatophytes isolated from clinically suspected cases attending Assam Medical College and Hospital, a tertiary care hospital was subjected to molecular identification using by PCR and sequencing of the ITS region of the ribosomal RNA gene as well as using MALDI-TOF (VITEK MS). Samples from across range of lesions from skin, nail, and hair were collected and primary identification was done by culture and microscopy as well as conventional phenotypic tests. Culture was done in Sabouraud Dextrose agar, Sabouraud Dextrose agar with chloramphenicol and cycloheximide, and dermatophyte test medium which was followed by geospatial confirmation by PCR. Results: The species isolated were T. rubrum (36.7%), T. interdigitale (32.6%), T. mentagrophytes complex (14.2%), T. tonsurans (8%), M. gyipseum (4%), T. schoenleinii (2%). The cases were clinically found to be T. corporis (44.9%), T. mentagrophytes (32.2%), T. rubrum (32.2%), T. interdigitale (10.20%), T. schoenleinii (9.16%), and T. tonsurans (4.08%).

Conclusion: T. rubrum, T. interdigitale, T. mentagrophytes, and T. tonsurans complex were the predominant species isolated.

P110
Potent inhibition of dermatophyte fungi by Australian native jatobha honey
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Poster session I, September 21, 2022, 12:30 PM - 1:30 PM

Objective: Honey has been used as a remedy for multiple ailments, and the antibacterial activity of many different floral honeys has been commonly explored. The capacity of honey to inhibit fungi is much less well understood. Here we investigate the inhibition of dermatophyte species by native Australian jatobha honey.

Methods: Jatobha honey was sourced from beekeepers and commercial suppliers. Artificial honey, made from glucose (22.93%), fructose (20.7%), and sucrose (11.4%), was used to control for osmolality. Hydrogen peroxide production by honey was assayed using horseradish peroxidase (HRP)~diaminobenzidine colorimetric test. Dermatophytes included Microsporum canis, M. audouinii, Trichophyton rubrum, T. interdigitale, T. schoenleinii, and T. tonsurans. Minimum inhibitory concentrations (MICs) and minimum fungicidal concentrations (MFCs) for honey were assessed using CLSI methods. Fluorescent and scanning electron microscopy were used to visualize the effect of honey on fungal conidia and hyphae.

Results: Jatobha honey inhibited the growth of the dermatophyte species with MICs ranging from 1.5-5.3% w/v, and MFCs from 2.5-5% w/v. No antimicrobial activity was seen with the artificial honey indicating this was not due to osmolality. Microscopy revealed that the inhibition was the result of the formation of cavities and caused hyphae to bulge and collapse. While the inhibitory action of jatobha honey was greatly reduced by the addition of catalase suggesting hydrogen peroxide production was responsible for inhibition and killing, microscopy revealed hyphae were still damaged suggesting there are agents within honey that augment antifungal activity. REDOX fluorescent assays failed to detect internal oxidative stress within hyphae, indicating that damage likely occurs on the hyphal surface.

Conclusion: Jatobha honey is a non-toxic agent that may have utility in the treatment of superficial fungal infections caused by dermatophyte fungal species.

P112
Nuclear magnetic resonance -based identification of metabolites in dermatophytes
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Poster session I, September 21, 2022, 12:30 PM - 1:30 PM

Objective: Nuclear magnetic resonance (NMR) spectroscopy provides a holistic snapshot of the metabolome of an organism. There is a dearth of studies till date that has explored NMR metabolic platform to study dermatophytes, despite its potential for rapid identification and subsequent application of the knowledge in performing faster antifungal susceptibility of dermatophytes. Here we attempted to study the frequency of various species of dermatophytes in clinically suspected cases of dermatomycoses and perform NMR-based identification of metabolites in the culture supernatant extracts of T. mentagrophytes and T. rubrum.

Methods: This was a hospital-based prospective study conducted in the isolates obtained from clinically suspected cases of dermatomycoses in the patients. Skin, nails, and hair samples of patients suspected with superficial fungal infections were processed for dermatomycoses 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 subset of the clinical isolates from the samples.

Results: Dermatomycoses were isolated in 81.88% (219/275) cases, with T. mentagrophytes being isolated in 65% (145/229) of isolates, followed by T. rubrum in 31.5% (86/275) isolates. In NMR study was done in the standard DAS3 strain (T. mentagrophytes ATCC 35133) and T. rubrum ATCC 32018) 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, 6-hydroxycarotene and α-acetoine 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 endpoints, further large-scale study will be helpful in this regard.

Conclusion: T. mentagrophytes was the predominant dermatophyte species in the study. Amongst the number of metabolites detected in T. rubrum and T. mentagrophytes, ‘6-hydroxycarotene’ and ‘α-acetoine’ 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 endpoints, further large-scale study will be helpful in this regard.