Objective: Tinea capitis is a relatively common disease, and the mycological examination is the gold standard for diagnosis. However, the probability of false negatives on the KOH test is up to 40%, and culture examination takes a long time for diagnosis. The characteristic pattern of dermatophytes not only aids in diagnosis, but also enables early treatment.

Methods: We evaluated 60 patients who were diagnosed with tinea capitis through clinical and dermatoscopic findings. The images of the lesions were taken with a digital camera (Nikon, HB-42) and photographed with dermatoscope (DermLite Fite 2 Prep) from the patients. The pictures were obtained by taking multiple focal points with dermatoscope. The comma, cockroach, Microscope-like, zigzag, and bear hairs were observed as the main findings.

Results: The dermatoscopic finding was seen with overlapping of various findings in each of the patients. Upon dermatoscopy, the more common findings were the comma type hair (64%) and the bear hair (64%). The comma hair (35%) and the proximal white shaft hair (35%) were less frequently observed and zigzag hair and Microscopic-like hair were not seen in six patients. In the photograph taken with a camera, findings considered to be dermatoscopic features such as comma hair or bear hair were not observed.

Conclusion: It is important for dermatologists to consider that abnormal findings in dermatoscopy may play an important role in diagnosing Tinea capitis. It will help in early treatment and prevent the progression of complications. Here, we report specific dermatoscopic findings which can narrow down the differential diagnosis.

Spectrum of Dermatophyte infections and drug susceptibility pattern of Dermatophytes in patients seeking to tertiary care hospital in Chhattisgarh state of India

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Poster session 1, September 21, 2022, 12:10 PM - 1:30 PM

Objective: 1. To isolate and identify various species of Dermatophytes from clinical specimens. 2. To perform and analyse the antifungal susceptibility testing of isolated Dermatophytes for commonly used antifungal agents; terbinafine and itraconazole.

Methods: A prospective study was conducted from December 2019 to October 2021. Clinical specimens (skin, hair, and nail) from suspected cases of dermatophytosis were received and processed in the Department of Microbiology. All the samples were subjected to microscopic examination and culture by standard techniques. The clinico-demographic profile was obtained. Specimens were processed for KOH and fungal culture. Dermatophytes were identified by studying macroscopic and microscopic characteristics of the isolates. The conidia-forming dermatophytes isolates were processed for antifungal susceptibility testing for terbinafine and itraconazole by Microbroth dilution testing following the CLSI M-38A2 guidelines.

Results: Total 248 patients with nail prominence (68%) were noted in the above-mentioned study period. Prevalence of study population belonged to rural area. Maximum numbers of cases were from the age group 21-30 years. Majority of patients belong to poor socioeconomic strata. Out of 248 samples, 178 (72%) had a positive KOH mount amongst which 72% had positive culture results. Amongst 2,681 specimens sc no scarping, 37% were wild and 3.4% hair samples were processed. Out of culture-positive samples 32.5% were Dermatophytes. The most critical form of dermatophytes was considered of both Tinea cutis and T. capitis (31%) followed by T. corvus (22%), and T. corvus (17%) for which 95% were suspected. The more common isolates were T. rubrum (25%), T. mentagrophytes (15%), and T. verrucosum. Onychomycosis was diagnosed in 17% patients of which 19% were positive for KOH. 49% showed culture positivity 11.3% isolates from nails were dermatophytes.

Antifungal susceptibility testing was done by Microbroth dilution method and analysed the range. The MIC range of major isolates, i.e., T. rubrum showed MIC ranges against terbinafine 0.03-4 g/ml and itraconazole 0.05-2 g/ml. T. mentagrophytes showed terbinafine 0.12-4 g/ml and itraconazole 0.012-2 g/ml. Four isolates of T. rubrum showed higher MIC values for terbinafine and two isolates had higher MIC for itraconazole. One isolate of T. mentagrophytes had higher MIC values of itraconazole, and one another isolate had higher MIC for terbinafine.

Conclusion: This study highlights the change in pattern of causative agents of dermatophytosis. The present study showed the predominance of T. rubrum. More extensive studies are needed to evaluate the cut-off range of antifungal susceptibility testing of dermatophytes with clinical follow-up to see the response of respective antifungal to guide the therapy.

A CASE OF NAIL DISCOLORATION DUE TO TOPICAL TREATMENT OF ONYCHOMYCOSIS WITH LULICONAZOLE 5% NAIL SOLUTION

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

We use efinaconazole 10% topical solution and luliconazole 5% nail solution for topical treatment of onychomycosis in Japan. We present a case of onychomycosis treated with nail debridement and topical luliconazole 5% nail solution to the nail and topical luliconazole 5% cream to the foot.

A woman in her 20s with chronic urticaria had a nail spike color change on her left big toe (Fig 1). We opened the spike lesion with a plastic nippers and KOH direct microscopic examination showed dermatophyton. We treated with topical luliconazole cream on the toes and soles of the foot and 5% solution on the nail. Because of the summer season, she worked outside in sandals without socks during treatment and noticed the nail yellow color change (Fig 2). We advised the patient to protect from sun light and not to walk outside without socks. Due to the report from the production company, the reason for nail color change to yellowish in photodegradation of luliconazole. After 1 year since first trial, the fungal infection of the big toe disappeared by our topical treatment. The nail yellow color change also disappeared. We recommended avoiding sunlight exposure on the treated nail during topical treatment of luliconazole 5% nail solution.

AIRE gene mutation predisposing chronic mucocutaneous Candidiasis in two kids from a Chinese family

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

Objective: Chronic mucocutaneous candidiasis (CMC) is a group of clinical syndromes characterized by chronic recurrent skin, nails, and mucosal superficial Candida infections. Various gene mutations have been reported to predispose individuals to CMC and its related syndrome. This study aims to study the clinical features and the genetic background underlying two kids of CMC from a Chinese family.

Methods: Clinical and laboratory findings of the two patients were studied, including physical examination, direct microscopic examination, and fungal culture. Genomic DNA of all family members was extracted from paraffinal blood leukocytes, and whole-exome sequencing (WES) was performed.

Results: A 2-year-old boy and his sister were admitted to the hospital due to recurrent thrush and thickening of their nails. Direct microscopic examination of their nails and the brother’s tongue showed branched pseudohyphae and yeast cells, and Candida albicans was identified through fungal culture. The brother also experienced a progressively impaired vision, which was diagnosed as retinal pigmentosa, causing no light perception in one eye and light perception up to 1/1 in the other. Their parents belonged to the Hui population in minority population in China and had a history of consanguineous marriage.

Conclusion: In this study, we identified two CMC patients of Chinese ethnic AIRE mutations. These patients remained as the importance of genetic analyzes in management of CMC, which then help to adjust the time of treatment, as well as to predict and early detect related complications.