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A diagnostic finding of Tinea capitae caused by Microsporum canis
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Poster session 1, September 21, 2022, 12:30 PM - 1:30 PM

Objectives: Tinea capitae 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 dermatophytosis not only aids in diagnosis, but also enables early treatment.

Methods: We evaluated six patients who were diagnosed with tinea capitae through clinical and demoscopic findings. The images of the lesions were taken with a digital camera (Nikon, HB-42) and photographed with dermatoscope (DermLite Fote 2 Plus) from the patients. The pictures were obtained by taking multiple focal points with dermatoscope. The cornia, cutercum, Microsporo-like, zig-zag, and bent hairs were observed as the main findings.

Results: The diagnostic finding was seen with overlapping of various findings in each of the patients. Upon demoscope, the most common findings were the cornia-like hair (64%) and the bent hair (64%). The cornia hair (55%) and the proximal white-shaft hair (55%) were less frequently observed, and zigzag hair and Microsporo-like hair were not seen in six patients. In the photograph taken with a camera, findings considered to be dermoscopic features such as cornio-like hair or cornia-like hair were not observed.

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

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Spectrum of Dermatophyte infections and drug susceptibility pattern of Dermatophytes in patients visiting to tertiary care hospital in Chennai state of India
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Objectives: 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 dermatophytes 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-M38-A2 guidelines.

Results: Total 248 patients with nail predominance (68%) were noted in the above-mentioned study period. Predominance 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 status. Out of 248 samples, 178 (72%) had a positive KOH mount amongst which 72% had positive cultures results. Amongst 248 samples, 178 (72%) were seen scraping, 37% were nail, and 1.6% hair samples were processed. Out of cultures-positive samples 52% were Dermatophytes. The most common clinical forms of dermatophytes were combination of both Tinea cruris and T. corporis (51%) followed by T. cruris (22%), T. corporis (17%) for which skin scraping was processed. The most common isolate was Trichophyton rubrum (75%), followed by T. mentagrophytes (15%) and T. mentagrophytes var. interdigitale. Onychomycosis was diagnosed in 17% patients of which 19% were positive by KOH-49% were culture positive. 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 range against terbinafine 0.03-4 μg/ml and itraconazole 0.03-2 μg/ml. Trichophyton mentagrophytes for terbinafine <0.12-4 μg/ml and for itraconazole 0.12-2 μg/ml. Four isolates of T. rubrum had 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 resistant agents of dermatophytes. 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 resistant antigens and to guide the therapy.

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AIRE gene mutation predisposing chronic mucocutaneous Candidiasis in two kids from a Chinese family
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Objectives: 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 peripheral 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 pseudoaphyse and yeast cells, and Candida albicans was identified through fungal culture. The brother also experienced a progressively impaired vision, which was diagnosed as retinitis pigmentosa, causing no light perception in one eye and light perception up to 0.1 in the other. Their parents belonged to the Han population in minority population in China and had a history of consanguineous marriage. Chronic mucocutaneous candidiasis (CMC) was diagnosed, and oral fluconazole was prescribed. After continuous fluconazole treatment for 6 months, the nails and the tongue became normal. These patients are still under follow-up.

Due to the recurrent Candida infections and history of consanguineous marriage, genetic susceptibility was suspected. We compared the WES data with all genes reported to be related to CMC, a homogeneous mutation in the AIRE gene was identified (c.769 C>T, p. Arg257Ter) in both parents. The parents were heterozygous carriers of the variant.

Conclusions: In this study, we identified two CMC patients of Chinese ethnic AIRE mutations. These patients remained the importance of genetic analysis in management of CMC, which then help to adjust the time of treatment, as well as to predict and early detect related complications.
Figure 2.