INTRODUCTION

Tinea capitis (TC) is a fungal infection of the scalp which is a frequent dermatophytosis of childhood. It can be dry which accounts for majority of the cases (90%) or the acute inflammatory oozing form. Diagnosis can be conducted easily by direct 10%–20% potassium hydroxide examination of tonsured hair, or by isolation of the dermatophyte in Sabouraud agar which would take weeks to reveal and delays diagnosis and initiation of a proper treatment.

Recently, the dermatoscopic examination of the hair and scalp (trichoscopy) has surfaced on and proven to be a very effective, proficient, and efficient useful tool in the swift diagnosis and screening of some hair disorders; for instance, infectious diseases such as TC. The presence of certain trichoscopic features allows speedy identifying and differentiating between these entities, especially in certain skin types, it has certain predilection of findings.

The most commonly reported trichoscopic features in TC patients have been coma hairs and corkscrew hairs (CHs), which have been described as markers of this particular disease.[1,2]

Trichoscope is considered the stethoscope of the dermatologist.

DISCUSSION

Low clinical suspicion can lead to inappropriate empiric treatments that delay diagnosis.

TC is commonly seen in children between the ages of 3 and 7. Though the disease was once considered to be unusual in adulthood, a growing number of authors supported the claim and have reported an increase in TC among adults, particularly menopausal and elderly women as well where the possible explanation can be attributed to hormonal changes and hair styling.[3]

In most of the cases as the literature reported, seeking medical advice and diagnosis was delayed. This could be explained due to ignorance of the parents and the general lack of awareness of the clinical picture of the ringworm infestations.

Although the general trend remains that Microsporum canis is the most common encountered causative agent in TC in

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Europe (80%), the epidemiology had some shifts recently where now a considerable number of the cases were found attributed to Trichophyton mentagrophytes, Trichophyton verrucosum, Trichophyton tonsurans, and Trichophyton rubrum. In Spain, it has been found that Trichophyton mentagrophytes constitutes a higher percentage, and Trichophyton tonsurans constitutes a higher percentage in the UK, Canada, and the USA. These major trend changes can be logically attributable and claimed to be due to the immigration state from endemic to and across the globes which facilitated the contagion flow.[4]

It should be noted that mycological culture is essential to confirm the claim and support it. Therefore, any scalp with scaly pruritic conditions should be sent for culture and sometimes the result is negative and this could be attributed to laboratory error and the personnel who handled the test wrongly.

Sometimes, some physicians commence a treatment with medium-potency topical steroids such as “mometasone scalp drops,” which will mask the clinical presentation dramatically and further modify the patient’s response, which do not resolve the process but can affect the sensitivity of diagnostic tests. Sometimes, various physicians have different inclinations for medication.

The different available effective modalities of antifungal medications can be summarized as follows: The standard treatment is griseofulvin. However, itraconazole and terbinafine have in large part replaced griseofulvin in the treatment of TC, and in addition, fluconazole and ketoconazole are evolving treatments for TC.

Conversely, for the long track record of use, safety, and efficacy, griseofulvin is still considered to be the present traditional drug of choice for TC in children.[9]

The main observed trichoscopic findings were comma hairs, CHs, and zigzag and recently a newly described finding known as “morse code-like hair.”

Although comma hair has been the first described feature to be a specific dermoscopic trait of TC by Slowinska et al., 2008, and Hernández-Bel et al., 2012, according to Lin and Li, 2014,[11,12] it is not always the case. Furthermore, zigzag hair was reported in TC and suggested to be due to its structural weakness where the fungus M. canis perforates the hair cuticle and causes conidia on the hair surface that bends on the paler part of the infected hairs.[7] Comma hairs have been hypothesized to represent cracking and bending of hyphae-filled hair shafts.[7]

CHs were first described by Hughes et al.,[4] 2011, as a trichoscopy marker for the diagnosis of TC in black children in skin type VI.

Recently, a new trichoscopic feature has surfaced up with grand magnification application (×150). It is called morse code like-hairs (bar code-like hairs). This feature coincides with the horizontal white bands, so the infected hair appears as empty bands which are related to localized areas of fungal infection. These horizontal white bands are usually multiple and may cause the hair to bend and break.[8] It denotes that the hair follicle is infected by fungus.[7]

Hughes et al.[4] reported CH as an additional feature in children with Trichophyton or Microsporum infection. In addition, broken and dystrophic hairs are seen in TC.[9]

While Hughes et al.,[4] 2011, had questioned whether CH is a variation of comma hair in the hair types of Skin type VI or it is specific to those with Trichophyton soudanense infection, other authors showed that CH is not specific to those with Trichophyton soudanense infection and suggested that CH represents a specific trichoscopic finding of dermatophytosis of the scalp in the darker skin.

On the basis of the data reported in the literature, it would therefore seem likely that CH is related to endothrix trichophyton “black dots” TC in skin type VI.

In our opinion, the trichoscopic finding of CH seems to be a variation of the comma hair of TC, as described by Slowinska et al., 2008,[11] suggesting that it is not a peculiar manifestation in darker skin but rather a possible manifestation related to curly hair. Further investigation is needed to confirm our assumption.[10]

Therefore, specific trichoscopic findings are appreciated with TC infection and make diagnosis quick and easily applicable.

Diagnosis of TC can be tricky for dermatologists, especially in noninflammatory TC caused by anthropophilic dermatophytes and in black patients, in whom erythema of the scalp is difficult to appreciate. The finding of a typical TC dermoscopic pattern may lead more quickly to a correct diagnosis.

Dermoscopy or “trichoscopy” represents a valuable, noninvasive technique allowing rapid and magnified in vivo visualization of the hair and scalp skin, with the visualization of morphologic attributes often indiscernible to the naked eye.
Further study is requisite to illustrate that the presence of the newly described feature “bar/morse code-like hairs” is an additional reliable finding of fungal infection of the hair follicles to back up the allege.

Doctors should be familiar with the history, epidemiology, and current knowledge of TC, as well as the newer antifungal agents (i.e., itraconazole, fluconazole, and terbinafine) to treat this infection.

CONCLUSION

TC, a dermatophytic infection of the scalp, is still relatively common in routine dermatology practice. It mostly affects children, generally aged between 3 and 7 years, and trichoscopy may therefore be a very useful diagnostic tool in this setting because it is quick, reliable, inexpensive, and noninvasive.

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Conflicts of interest

There are no conflicts of interest.

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