Summary

Tinea capitis is fungal infection of the scalp, hair follicles and hair shafts. It is especially common in the pediatric population. It is caused by different species of the dermatophytes family.

The most common are genus Microsporum and Tricophyton. The species of dermatophytes causing tinea capitis vary from country to country.

According to mode of transmission, they can be classified to anthropophilic, zoophilic and geographic. Anthropophilic organisms, as *T.tonsurans*, are responsible for most fungal skin infections. Transmission can occur by direct contact or from exposure to desquamated cells.

Microsporum canis, zoophilic dermatophyte, is responsible for most cases of tinea capitis in children. Infection is either by direct contact with infected animals or with their hair or indirectly from other humans colonized with the fungus.

Many factors affect the incidence and prevelance of this disease as socioeconomic status, age, gender, animal contact and lifestyle.

The infection has decreased in developed countries, while it is still high in developing countries. It is most common in school children. Beyond this age group, the incidence declines because of the onset of puberty and seborrhea. Different studies showed higher incidence in males than girls in general.

There are 4 types of hair invasion:

- •Small-spored ectothrix hair invasion: caused by *M.audouinii, M.canis* and *M.gypseum*.
- •Large-spored ectothrix: caused by *T.verrucosum, T.mentagrophytes* and *T.rubrum.*
- •Endothrix hair invasion: It is caused by *T.violaceum, T.rubrum* and others.
- •Favus type: Caused by *T.schöenleinii.*

Clinically, its symptoms are wide ranging and variable, so it is easy to miss the diagnosis.

Roughly, it could be classified into kerion, favus, black dot and scaly type.

Black dot type, in which, broken off hairs are visible within the patch of alopecia.

As for the scaly type, Circular patches of alopecia with marked scaling can be seen.

A diagnosis can be made with a focused history, physical examination, and potassium hydroxide microscopy. Occasionally, Wood's lamp examination, fungal culture is required.

Treatment of this condition includes both local and systemic antifungal agents, and currently only a single agent, griseofulvin, is approved. Tinea capitis requires systemic treatment because antifungal creams are unable to penetrate the hair shaft sufficiently to clear the infection.

Adjunctive topical shampoos containing selenium sulfide, or ketoconazole are recommened.

All the family members should be treated with anti-fungal shampoo to prevent re-infection. The patient should avoid sharing combs or caps with other people to avoid spreading the infection.

In this study, we aimed at estimating the incidence rate of tinea capitis among primary school children in Fayoum city, Fayoum governate, Egypt, through examining twelve schools, six private and six public. The total number was 12128. Their ages ranged between 5.5 and 12 years. Around 70% of students were males in public schools and 62% in private schools. While females constituted 31% and 38% in public and private schools respectively. T.capitis was positive in 49 students representing 0.4% of all students with a higher percentage among public school children (73%) and a higher percentage among boys (83.7%). Mycological culture was positive in only 25 cases representing 51% of samples collected (0.2% of total students).

The most common isolated organism was M.canis represented 40% of isolated fungal strain. Yet, its association with pets among positive cases is insignificant.

Dermoscopy was so helpful in assuring the diagnosis.

We strongly recommend vegetables oil to be used as a simple measure to prevent against this infection as revealed to be the possible cause behind the discrepancy between both sexes in getting the infection being higher in males.

Pets should be screened regularly to treat them as early as possible.