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Case Report

A Case of Tinea Capitis Favosa Due to *Trichophyton schoenleinii* in Morocco

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Abstract: Tinea favosa is a chronic inflammatory dermatophytic infection of the scalp caused by *T. schoenleinii*. It is transmitted by contagion between individuals and is still endemic in Africa. We describe a singular case of tinea capitis favosa caused by *Trichophyton schoenleinii* observed in two years old girl. After physical exam and laboratory data the diagnosis was confirmed. she was treated with success by griseofulvin for 6 weeks and topical treatment.
Keywords: Tinea favosa, *Trichophyton schoenleinii*.

INTRODUCTION

Trichophyton schoenleinii is an anthropophilic dermatophyte that causes favus or tinea favosa and is transmitted by contact between humans. Favus appears in both children and adults. This dermatophyte is endemic in Africa and Central Europe [1]. After the Second World War, improvements in living conditions and hygiene in developing countries have been associated with the almost complete disappearance of this dermatophyte [2]. We describe a singular case of childhood tinea capitis favosa caused by *Trichophyton schoenleinii*.

CASE REPORT

A 2 –year-old Moroccan girl, living on the city of Fes, was seen at the department of dermatology for recent plate alopecia.

Examination revealed a small scaly alopeciante plate. No other dermatological or ungueal abnormality was observed; she was otherwise a healthy girl. Scales and altered hairs were collected. Direct microscopic examination of the hairs in 10% potassium hydroxide revealed an endothrix pilar invasion, with hyphae and air spaces in the hair shafts. Culture on Sabouraud glucose agar with antibiotics produced waxy and irregularly folded colonies that later became velvety. They consisted of irregular, dichotomously branched filament with favic chandeliers (Figure1) and a few intercalate chlamydospores and nail head (figure2). A diagnosis of tinea capitis with *Trichophyton schoenleinii* was made. The patient was treated with 20 mg/kg/day of oral griseofulvin for 6 weeks associated with cicloproxolamine for 8 weeks as an antifungal topic. Healing was obtained and no alopecia was observed. All the family members had apparently healthy scalps.

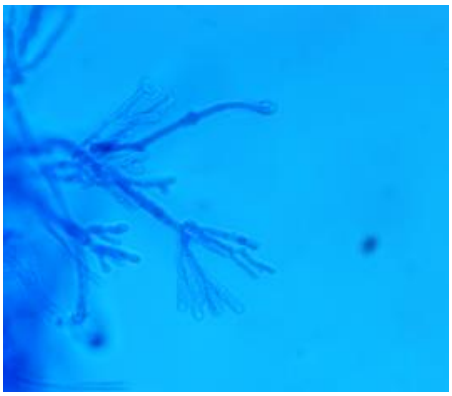

Fig-1: Favic chandeliers

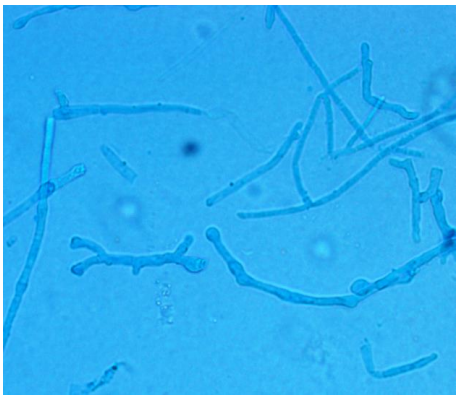

Fig-2: N Nail head

DISCUSSION

It was in 1839 when Johann Lucas Schoenlein described the fungal etiology of favus. A few years later Schoenlein's assistant Robert Remak established the causation between the fungal infection and the disease symptoms and he proved Favus to be contagious, and named the fungus as *Achorion schoenleinii* in honor of his teacher [3-6]. Today the anthropophilic T. schoenleinii is classified in the Arthroderma simii group along with *T. simii* and zoophilic *T.mentagrophytes* [7].

Tinea favosa is a chronic inflammatory dermatophyte infection of the scalp, glabrous skin, and nails [8] caused by *T. schoenleinii*. Occasionally *Trichophpyton. violaceum* or *Microsporum gypseum* may cause similar lesions.

Foci of favus have been seen worldwide including Middle East, Kashmir, Iran, certain North and South African regions, Denmark and some foci in South America (Brazil), Canada (Quebec) [9]. Thanks to the improvement in socio-economic conditions and the introduction of grisofulvin in 1958, tinea favosa was eradicated or became very rare in the majority of these regions.

It is now limited to some endemic regions like China, Nigeria and Iran [9-13]. In Europe, in two studies of tinea capitis, favus was reported, respectively, in 0.2% and 0.5% of cases [14]. Another American study between 1982 and 1984 did not find any case of tinea capitis favosa [15].

In North Africa, favus also seems to be rare. There has been a dramatic decrease in the incidence of favus in Libya, with the complete disappearance of *T. schoenleinii* as a causative agent of tinea capitis [16] .

In Tunisia, the incidence of favus had markedly decreased (1950:25%/1998:0.6%) [17]. Review of the recent studies conducted in Tunisia confirmed the rarity of favus in this country (0.2% to 0.75% to among tinea capitis) [17, 18].

In Morocco, the same evolutionary trend was observed. Indeed, in Rabat, Boumhil and al. reported one case (0.61%) of 162 cases of tinea capitis during 6 years (2002 to 2008). Wereas in the early 1980s, favus represented 8% of tinea capitis in Morocco [19]. In another study, also in Rabat, Oudaina et al. identified 30 cases (2.3%) of 1299 cases between 1993 and 2007 [20]. The last case was recorded in 2011 by Rami *at al*:(a 13-years-old mal) [21].

In 95% of the cases Favus presents with typical clinical symptoms like scutula, yellowish cup-shaped crust, dull grey hair , alopecia and an unpleasant "mousy" odor [9]. Besides this clinically typical form, there are erythematous follicular forms without alopecia, similar to psoriasis, seborrheic dermatitis or tinea amiatacea [2, 9, 22].

The Wood's light examination reveals a green fluorescence [9, 23, 24]. The direct examination reveals an endothrix infection [8] and the hyphae can be seen filling with bubbles of air.

In Sabouraud medium, *T. schoenleinii* has been growing between 2 to 4 weeks giving two macroscopic aspects of colonies: white colonies or waxy colonies with ramifications that emerging in agar [11, 22-25].

The treatment of tinea favosa should include systemic and topical antifungal therapy and strict hygiene measures. The systemic treatment is based on griseofulvin per os for several weeks to obtain a clinical and mycological healing [26]. Fungal resistance to griseofluvin has been described [27]. Then, another antifungal could be used like the terbinafine and itraconazole. T. schoenleinii is transmitted from one person to another by the use of common combs or hats [23, 9, 12]. It is then necessary to look for an infesting family or school environment.

It's important to diagnose and treat tinea favosa at an early stage of evolution because lesions evolve into ultimate scarring alopecia [23, 9, 24].

CONCLUSION

Favus is rare mycological pathology of the hair. This case illustrates the persistence of tinea capitis caused by *Trichophyton schoenleinii* in Morocco. In any dermatosis of the scalp in a child, the clinician should investigate the possibility of a mycotic infection by means of mycological examination. The active case detection and treatment, and improving hygienic conditions could accelerate the eradication of this type of tineas.

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RÉFÉRENCES

1. Kwon-Chung KJ, Bennett JE; Medical mycology. Philadelphia, Lea &Febiger, 1992; 105-161.
2. Khaled A, Ben Mbarek L, Kharfi M, Zeglaoui F, Bouratbine A, Fazaa B; Tinea capitis favosa due to Trichophyton schoenleinii. Acta DermatovenerologicaAlpina, Panonica, et Adriatica, 2007;16:34–36.
3. Weitzman I, Summerbell RC; The dermatophytes. Clin Microbiol Rev., 1995; 8:240–59.
4. Seeliger HP; The discovery of Achorion schoenleinii: facts and stories (Johann Lucas

Schoenlein and Robert Remak). Mykosen, 1985; 28:161–82.
5. Seeliger HP; The beginnings of medical mycology. In: Tumbay E, editor. FEMS symposium on dermatophytoses and dermatophytoses in man and animals (May 21–23, 1986, Izmir), proceedings. Izmir: Bilgehan Publishing House, 1988; 1–15.
6. Gupta AK, Summerbell RC; The dermatophytes. In: Hay RJ, Merz W, editors. Topley and Wilson's microbiology and microbial infections, medical mycology, vol. 5. 10th ed. London: Arnold Publishers, 2005; 220–43.
7. Gräser Y, Scott J, Summerbell RC. The new species concept in dermatophytes—a polyphasic approach. Mycopathologia, 2008; 166:239–56.
8. Szepietowski J, Schwartz RA; Favus. eMedicine from WebMD, 2009.
9. Ilkit M; Favus of the scalp: an overview and update. Mycopathologia, 2010; 170:143–154.
10. Deng S, Bulmer GS, Summerbell RC, De Hoog GS, Hui Y, Gräser Y; Changes in frequency of agents of tinea capitis in school children from Western China suggest slow migration rates in dermatophytes. Medical Mycology, 2008; 46:421–427.
11. Jahromi SB, Khaksar AA; Aetiological agents of tinea capitis in Tehran (Iran) Mycoses, 2006; 49:65–67.
12. Nweze EI; Etiology of dermatophytoses amongst children in northeastern Nigeria. Medical Mycology.2001;39:181–184.
13. Seebacher C, Bouchara JP, Mignon B; Updates on the epidemiology of dermatophyte infections. Mycopathologia, 2008; 166:335-352.
14. Niczyporuk W, Krajewska-Kułak E, Łukaszuk C; Tinea capitis favosa in Poland. Mycoses, 2004; 47(5-6):257-60.
15. Sinski JT, Flouras K; A survey of dermatophytes isolated from human patients in the United States from 1979 to 1981 with chronological listings of worldwide incidence of five dermatophytes often isolated in the United States.Mycopathologia, 1984; 85(1-2):97-120.
16. Gargoom AM, Elyazachi MB, Al-Ani SM, Duweb GA; Tinea capitis in Benghazi, Libya. Int J Dermatol., 2000; 39:263–5.
17. El Euch D, Mokni M, Sellami A, Cherif F, Azaiz MI, Ben Osman Dhahri A; Les teignes du cuir chevelu observées à Tunis de 1985 à 1998: à propos de 1 222 cas. Journal de mycologie médicale, 2001; 11(2):87-91.
18. Neji S, Makni F, Cheikhrouhou F, Sellami A, Sellami H, Marreckchi S; Epidemiology of dermatophytoses in sfax, Tunisia. Mycoses, 2009; 52:534-8.
19. Boumhil L, Hjira N, Naoui H, Zerrour A, Bhirich N, Sedrati O ; Les teignes du cuir chevelu à l'hôpital Militaire d'Instruction Mohamed V (Maroc). J Mycol Med., 2010; 20 : 97-100.
20. Oudaina W, Biougnach H, Riane S, El Yaagoubi I, Tangi R, Ajdae L; Epidémiologie des teignes du cuir chevelu chez les consultants externes à l'hôpital d'enfants de Rabat (Maroc). J Mycol Med., 2011; 21 : 1-5.
21. Rami M, Lemkhente Z, Benjelloun S, Lahlou H, El Haouri M; Teigne favique . Maroc Médical, tome 33 n°3, septembre 2011.
22. Velho GD, Selores M, Amorim I, Lopes V; Tinea capitis by Trichophyton schoenleinii. European Journal of Dermatology, EJD, 2001; 11:481–482.
23. Chabasse D, Guiguen CP, Contet-Audonneau N ; Mycologie Médicale. Masson; Paris: Mycoses autochtones et cosmopolites, diagnostic et traitement, 1999; 127–49.
24. Zaraa I, Hawilo A, Aounallah A, Trojjet S, El Euch D, Mokni M, Osman AB; Inflammatory Tinea capitis: a 12-year study and a review of the literature. Mycoses, 2013; 56(2):110-6.
25. Matte SM, Lopes JO, Melo IS, Costa Beber AA; A focus of favus due to Trichophyton schoenleiniiin Rio Grande do Sul. Revista do Instituto de Medicina Tropical de São Paulo, 1997; 39:1–3.
26. Poppe H, Kolb-Mäurer A, Wobser M, Trautmann A; Pitfall scarring alopecia: favus closely mimicking lichen planus. Mycoses, 2013; 56(3):382-4.
27. Zheng YC; Morphology of Griseofulvin-resistant isolates of Mongolian variant Trichophyton schoenleinii. Clin Med J., 1990; 103: 489–92.