

Tinea Faciei – Hypo Diagnosed Facial Dermatoses

Agron Starova¹, Margareta Balabanova Stefanova¹, Mihael Skerlev²

¹University Clinic of Dermatology, Faculty of Medicine, University "Ss Kiril and Metodij", Skopje, Republic of Macedonia;

²Clinical Hospital Center Zagreb, Dermatology Department, Zagreb, Croatia

Abstract

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Correspondence: Agron Starova, MD. University Clinic of Dermatology, Faculty of Medicine, University "Ss Kiril and Metodij", Skopje, Republic of Macedonia. E-mail: starovaagron@yahoo.com

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Background. Tinea faciei is dermatophytoses limited to the nonbearded regions of the face. The objectives of the study are: to assess the frequency of the Tinea faciei patients, the most common causative dermatophytic species and to point out on great diversity of clinical presentation of Tinea faciei.

Patients and Methods. The patients with Tinea facie treated in the Mycological Ambulance, Department of Dermatology, Medical Faculty in Skopje, during the period Jun 2007 - Jan 2009 were evaluated. The diagnosis was confirmed by microscopic examination of skin and hair specimens and by culture on Sabouraud's medium with added chloramphenicol, gentamycin and actidion.

Results. Six hundreds patients with dermatophytosis were diagnosed over a time period of twenty months (Jun 2007 – January 2009). The Tinea faciei patients represented 2.2% (13) of all patients with dermatophytosis. Most frequently isolated dermatophytic species are *Trichophyton verrucosum* (38.46% of all Tinea faciei patients), *Microsporum canis* (30.77%), *Trichophyton rubrum* (23.08%) and *Trichophyton mentagrophytes* var. *mentagrophytes* (7.69%). The zoophilic dermatophytic species are predominant. All of the Tinea faciei patients are initially misdiagnosed as having other dermatoses.

Conclusions. In patients with erythematous lesions of the face, a diagnosis of Tinea faciei should be considered. The variable morphology of Tinea faciei creates a large differential diagnosis. The frequent atypical clinical features and incognito presentations make Tinea faciei a unique and most frequently hypo diagnosed facial dermatoses with often delayed appropriate treatment.

Introduction

Tinea faciei is dermatophytoses limited to the nonbearded regions of the face, characterized by a mildly pruritic single or multiple erythematous scaly patches with or without active border (Fig. 1). It occurs worldwide, but more prevalent is in tropical humid climates [1]. The causative agent of Tinea faciei varies according to the geographic region and the potential reservoirs located in the environment [2, 3]. Tinea faciei is uncommon and often misdiagnosed at first. It is often confused with other

dermatoses, as fungal infections occur more frequently on other parts of the body. Most cases of Tinea faciei are superficial and curable with topical antifungals [1].

Materials and Methods

The patients with Tinea faciei treated in the Mycological Ambulance, Department of Dermatology, Medical Faculty in Skopje, during the period Jun 2007 -

Figure 1: *Tinea faciei*.

Jan 2009 were evaluated. The diagnosis was confirmed by microscopic examination of skin and hair specimens and by culture on Sabouraud's medium with added chloramphenicol, gentamycin and actidion.

Results

Six hundreds patients with dermatophytosis were diagnosed over a time period of twenty months (Jun 2007 – January 2009). The tinea faciei patients represented 2.2% (13) of all patients with dermatophytosis (Fig. 2).

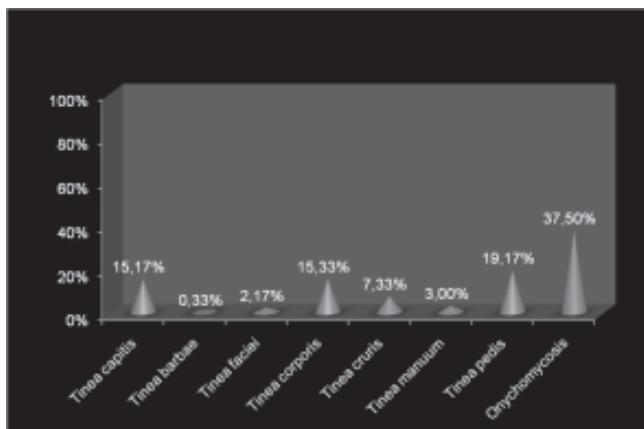


Figure 2: Distribution of patients with dermatophytosis at the Department of Dermatology in Skopje in the years from 2007 to 2009.

Most frequently isolated dermatophytic species are *Trichophyton verrucosum* (38.46% of all *Tinea faciei* patients), *Microsporum canis* (30.77%), *Trichophyton rubrum* (23.08%) and *Trichophyton mentagrophytes* (7.69%) (Table 1). In all age groups *Tinea faciei* was more frequent in males. According to patient's age *Tinea faciei*

Table 1: Distribution of patients with dermatophytosis by isolated dermatophytes at the Department of Dermatology in Skopje in the years from 2007 to 2009.

Dermatophytes		Dermatophytosis							
		Tinea capitis	Tinea barbae	Tinea faciei	Tinea corporis	Tinea cruris	Tinea manus	Tinea pedis	Oncotic mycosis
<i>Microsporum canis</i>	N ^a	67	0	4	47	0	0	0	2
	%	73.83	0	30.77	51.09	0	0	0	0.89
<i>Trichophyton verrucosum</i>	N ^a	9	0	5	9	0	0	0	0
	%	9.9	0	38.46	9.78	0	0	0	0
<i>Trichophyton mentagrophytes</i>	N ^a	3	2	1	5	0	1	6	0
	%	3.3	100	7.69	5.43	0	5.56	5.22	0
<i>Trichophyton violaceum</i>	N ^a	3	0	0	2	1	0	2	2
	%	3.3	0	0	2.17	2.27	0	1.74	0.89
<i>Trichophyton rubrum</i>	N ^a	0	0	3	29	29	10	74	157
	%	0	0	23.08	21.75	65.91	55.56	64.35	69.7
<i>Microsporum gypseum</i>	N ^a	1	0	0	3	0	0	0	0
	%	1.09	0	0	3.26	0	0	0	0
<i>Trichophyton mentagrophytes</i> var. <i>interdigitale</i>	N ^a	7	0	0	3	8	6	25	52
	%	7.69	0	0	3.26	18.18	33.33	21.73	23.11
<i>Microsporum ferrugineum</i>	N ^a	1	0	0	2	1	0	2	0
	%	1.09	0	0	2.17	2.27	0	1.74	0
<i>Epidemophyton floccosum</i>	N ^a	0	0	0	1	5	1	6	12
	%	0	0	0	1.09	11.37	5.56	5.22	5.33
Totally		91	2	13	92	44	18	115	225

may occur in all age groups, but two peaks are observed. One peak involves children between 3 and 10 years and the second one between 51 and 70 years.

The topical treatment for *Tinea faciei* patients is shown in Table 2. We can see that in 70% of the patients the topical corticosteroid treatment was the first choice. Anamnestically, average time to confirm the diagnosis for *Tinea faciei* was 55 days.

Table 2: Topical treatment in patients with *Tinea faciei*.

Local Treatment	Number	%
Without treatment	2	15
Unknown	2	15
Antimycotics	0	0
Corticosteroids	9	70

Discussion

Tinea faciei is a uncommon superficial dermatophyte infection limited to the glabrous skin of the face. In pediatric and female patients, the infection may appear on any surface of the face, including the upper lip and chin. In men, the condition is known as *Tinea barbae* when a dermatophyte infection of bearded and moustache area occurs. The *Tinea faciei* patients represented 2.2% of all patients with dermatophytosis. There is decrease of incidence of the *Tinea faciei* patients treated in the Mycological Ambulance, Department of Dermatology,

Medical Faculty in Skopje. The infection is frequently acquired from pets, but it can also be spread from individuals with dermatophyte infection elsewhere on the body. The causative agent of *Tinea faciei* varies according to the geographic region and the potential reservoirs located in the environment [1-3].

Generally, animal reservoirs of zoophilic dermatophytes, especially *Microsporum canis* and *Trichophyton verrucosum*, are global among pets and livestock [4]. The dermatophytes isolated in our patients are: *Trichophyton verrucosum* in 5 cases (38% of *Tinea faciei* patients), *Microsporum canis* 4 cases (31%), *Trichophyton rubrum* 3 cases (23%) and *Trichophyton mentagrophytes* var. *mentagrophytes* 1 case (8%). As in many regions in the world [4], in our country predominate zoophilic dermatophytes. Infection caused by zoophilic dermatophytes is usually associated with inflammatory reactions that are more severe than those due to anthropophilic fungi. Deep inflammatory plaques are round, inflamed and can have a boggy pustular surface. Consistent and integrated efforts of medical and veterinary services associated with health education are required in future to eliminate further spread of infection. On the other hand, in North America, *Trichophyton tonsurans*, *Trichophyton rubrum* and *Microsporum canis* are the most common dermatophytes in *Tinea faciei* patients [1-3]. The infection caused by anthropophilic fungi can be spread from person-to-person with dermatophyte infection elsewhere on the body. Occasionally, *Tinea faciei* may simultaneously occur with other forms of dermatophyte infections, especially *Tinea capitis* and *Tinea corporis* [5]. One study showed that, in 85% of *Tinea faciei* patients, the nails were also infected by the same agent isolated from the face [1,6].

In our patients *Tinea faciei* was more frequent in males. It has been suggested that females are more frequently affected than males [1]. The difference may be semantic, as dermatophyte infection on the bearded areas of males are often diagnosed as *Tinea barbae*, whereas, in females, they are more likely to be diagnosed as *Tinea faciei* [6]. *Tinea faciei* may occur in all age groups, but two peaks are observed. One peak involves children, often due to direct contact with pets [1]. Children are often infected on following holidays when they may come into contact with animals whilst playing [1]. Cases have also been reported in neonates, but are rare [7-9]. These patients may acquire the infection from parents or siblings. The second peak in our patients occurred in elder population between 51 and 70 years, which can be explained as a result of higher risk in elderly for dermatophytosis. However

Tinea faciei may occur in those aged 20–40 years. This may be due to the heightened physical activity common in this age group [10,11]. Mycological investigation is essential in the diagnosis of *Tinea faciei*. It includes direct microscopic examination for hyphal elements and culturing. Microscopic examination of potassium hydroxide (KOH) preparations is the easiest, fastest and most sensitive test. Most cases of *Tinea faciei* are superficial and curable with topical antifungals. However, resistant strains, extensive disease, incognito presentation or immunosuppression may require oral antifungal therapy [12]. Because of the complex anatomy of the face, atypical features are more frequently found on the glabrous skin than the typical annular patches of *Tinea corporis* (Fig. 3).



Figure 3: *Tinea faciei*.

The variable morphology of *Tinea faciei* creates a large differential diagnosis. The differential includes many non-fungal dermatoses such as rosacea (Fig. 4), atopic



Figure 4: Rosacea-like *Tinea faciei*.

dermatitis, pityriasis alba, seborrheic dermatitis, psoriasis vulagris, irritant contact dermatitis, perioral dermatitis, discoid lupus erythematosus (DLE), systemic lupus erythematosus SLE, granuloma annulare (Fig. 5), polymorphous light eruption (PMLE), impetigo contagiosa etc.



Figure 5: Granuloma annulare-like Tinea faciei.

Tinea faciei is the most frequently misdiagnosed entity amongst cutaneous fungal infections due its variable appearance [1, 13]. As many as 70% of patients with Tinea faciei are initially misdiagnosed as having other dermatoses [1, 14]. In two independent studies found that 50% of patients with Tinea faciei were misdiagnosed as having a photosensitive skin disease [15, 16]. In our patients, according to the first-line topical treatment, we can conclude that, paradoxical, in, none of the cases it's not even thought that the diagnosis could be Tinea faciei. Average time to mycologically confirm diagnosis of Tinea faciei in our patients was 55 days!

In patients with erythematous lesions of the face, a diagnosis of Tinea faciei should be considered. The variable morphology of Tinea faciei creates a large differential diagnosis. The frequent atypical clinical features and incognito presentations make Tinea faciei a unique and most frequently hypo diagnosed facial dermatoses with often delayed appropriate treatment.

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