

The prevalence of dermatophytosis in patients attending Al-Yarmouk Teaching Hospital

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Abstract:

Background: Dermatophytic infections are common in our country with many clinical types. **Objective:** This study was arranged to assess the clinical and epidemiological aspects of dermatophytosis among patients attending Al- Yarmouk teaching hospital. **Patients and methods:** A total of 96 patients with dermatophytosis were examined in the dermatology out patients department in Al- Yarmouk teaching hospital, over a period of six months. **Diagnosis** was made clinically and confirmed by potassium hydroxide testing in suspicious cases. **Results:** prevalence rate was 0.01% with the majority of cases in the teenage group, males were more frequently affected than females (2.5:1), most of the patients were from rural areas, and tinea corporis was the most commonly encountered type. **Conclusion:** Dermatophytosis still accounts for an important curable problem in our dermatological practice, which requires further attention and support.

Key words: Dermatophytes, Trichophyton, Tinea

ملخص البحث:

الخلفية: تعتبر السعفة من الأمراض الشائعة و توجد بعدة أنواع. الهدف: أجريت الدراسة لتحديد الأوجه السريرية ومعدل الانتشار للسعفة بين مرضى مستشفى اليرموك التعليمي. الطريقة: شملت الدراسة ٩٦ مريضا مصابا بالسعفة، تم فحصهم في العيادة الاستشارية الخارجية لمستشفى اليرموك التعليمي في فترة ستة أشهر، تم التشخيص سريريا وتم تأكيده بالفحص بمحلول هيدروكسيد البوتاسيوم في الحالات المشتبه بها. النتائج: نسبة شيوع السعفة كانت ٠,٠١% والغالبية من الحالات كانت في سن المراهقة، وكان الذكور أكثر تعرضا للإصابة من الإناث وبمعدل ٢,٥:١ ، معظم الريفية و كانت سعفة الجسم أكثر الأنواع شيوعا. الخاتمة: تعتبر السعفة من الأمراض المرضي كانوا من المناطق القابلة للعلاج والمهمة في التطبيقات الجلدية والتي تتطلب المزيد من البحث والاهتمام.

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Introduction:

Dermatophytic infections are among the commonest infections encountered in dermatologic practice. Their etiologic agents are classified into 3 genera of imperfect fungi; Epidermophyton, Microsporum, and Tricho-phyton, grouped according to their natural habitat as anthropophilic, zoophilic, and geophilic, with the primary reservoir in humans, animals, and the soil, respectively^(1,2).

Dermatophytes have the ability to invade keratinized tissue (skin, hair and nails), but are usually restricted to the non-living cornified layer of the epidermis, because of their inability to penetrate viable tissue of immunocompetent host^(3,4).

However, invasion does elicit a host response ranging from mild (usually with anthropophilic fungi) to severe (with zoophilic fungi)^(2,4).

Clinically, fungal infections of eight anatomical regions are commonly recognized: T. capitis, T. corporis, T. cruris, T. pedis, T. faciei, T. barbae, T. manum and T. unguium^(1,2). The current study was arranged to assess the different clinical and epidemiological aspects of dermatophytosis among patients in Al-Yarmouk Teaching Hospital.

Patients and Methods:

A total of 96 patients with dermatophytosis were examined in

the Dermatology Outpatient Department in Al-Yarmouk Teaching Hospital during the time period from December 2002 to August 2003 (excluding the 2 months of the war).

Diagnosis was mainly clinical and relied on KOH examination in suspicious cases.

Patients were enquired regarding their age, sex, residence, occupation, animal contact, present complaint, duration of the lesion, mode and time of onset of lesion, history of associated skin diseases for the patient and his family.

Clinical examination was done for the patients regarding the site, size, and morphology of the lesion. KOH examination was done in all cases to confirm the diagnosis.

Results:

During a six-month period, we were able to collect 96 patients with dermatophytosis out of 9000 patients who attended the dermatology outpatient department of Al-Yarmouk Teaching hospital giving a prevalence rate of 0.01% for dermatophytic infections.

Patients' ages ranged between 9 months to 41 years, with a median age of 14.7 years \pm SD of 11.5 years.

There were 68 (70.8%) males and 28 (29.1%) female patients with a male: female ratio of 2.5:1 (fig. 1) Regarding residence, 61(63.5%) patients were from rural areas,

while 35(36.4%) patients were from urban areas (fig 2).

The different clinical types of dermatophytic infections are summarized in table (1).

Tinea corporis was the main clinical type (31.4%) seen among our patients, affecting mainly the upper extremities [12(40%)], trunk [10 (33.3%)], and lower extremities [8 (26.7%)].

Regarding *T. unguum*, the distal subungual type was the most common (80%) while proximal subungual type was seen in 20% of patients. The other types were not seen in the study.

Discussion:

Dermatophytosis is commonly encountered in the outpatient dermatologic clinics and our study revealed a prevalence rate of (0.01%). This result is comparable to a prevalence rate of 0.02% and 0.03% obtained from Basrah- Iraq [5] and Hamadan, Iran [6] respectively, while is much less than the (4.54%) rate reported from Nepal [7].

Patients' ages showed a wide age range between 9 months to 41 years, however, they showed accumulation around the teenage group with a median of 14.7 years (predominantly by *T.corporis* and *T.capitis* patients which constituted the majority of cases). This indicates that dermatophytic infection can occur at any age, as it had been reported [8], and agree with other reports of predominant

teenage group with the range of 11-20 years reported elsewhere [7]. Males were affected more than females with male: female ratio of 2.5:1, this is concordant with the literature of a male to female ratio of 2.5:1 [7] to 1.5:1 [5].

The majority of our patients came from rural areas (63.5%), even though the hospital is located in an urban area, this may reflect that a large proportion of patients attending this hospital are from rural areas in the outskirts of Baghdad.

In the present study, the most common clinical types of dermatophytosis were *T. corporis* (31.2%) followed by *T. capitis* (25%). Reports in the literature showing *T. capitis* as the most common clinical type with figures of (70%) in Marseille- France [10], (62.9%) in Hamadan- Iran [6], (35.2%) in Basrah- Iraq [5] and (34.2%) in United Arab Emirates[9]. However, a report from Nepal revealed *T. corporis* (43%) as the most common clinical type of tinea followed by *T. cruris* (43%) and *T. pedis* (20%) [7].

The scaly patch type was the most common (41.6%) variant of *T. capitis* followed by kerion (33.3%) and black dot type (25%) while no patients with favus were seen, in agreement with the general reports regarding their prevalence [1-3].

Tinea barbae and *T. manum* are both relatively rare [2-7] and were not found in our study.

All types of dermatophytic infections showed more male affections in the present study. This agrees with literature reports [5-7]. Males have a higher incidence of Tinea probably because they have more exposure to sporting facilities and institutions; have less careful hygienic practices, and more occupational risk of exposure to dermatophytic infections.

Upper extremities were the site mostly affected (40%) by T. corporis while lower extremities were relatively approximate and consistent with literature reports [3, 11].

Concerning types of T. unguium, the predominant type was the distal subungual variety (80%), a finding consistent with the literature [3, 12] and with the reports that describe other types as less common or rare varieties [12, 13].

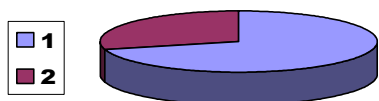


Figure 1: sex distribution of patients with dermatophytosis

**1: males 70.8%,
2: females 29.2%**

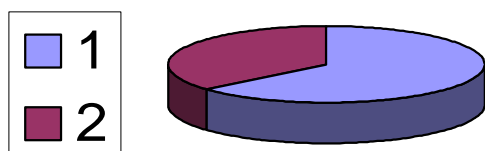


Figure 2: residence distribution of patients with dermatophytosis

1: rural (63.5%), 2: urban (36.5%)

Table (1): clinical types of dermatophytosis

Clinical type	Number of cases	Percentage
T. corporis	30	31.2
T. capitis	24	25
Grey patch	10	
Kerion	8	
Black dot	6	
Favus	0	
T. cruris	15	15.6
T. pedis	12	12.5
T. unguium	10	10.4
T. faciei	5	5.2
T. barbae	0	0
T. manum	0	0

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Table 2: sex distribution of different clinical types of dermatophytic infection

CLINICAL TYPE	MALE		FEMALE	
	NO.	%	NO.	%
T.CORPORIS	22	73.3	8	26.7
T.CAPITIS	16	66.7	8	33.3
T.CRURIS	12	80.0	3	20.0
T.PEDIS	7	58.3	5	41.7
T.UNGUIUM	6	60.0	4	40.0
T.FACIEI	5	100	0	0

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