

Original Research Article

A Clinical And Mycological Study Of Dermatophytosis In Shadan Institute Of Medical Science Teaching Hospital And Research Centre, Himayath Sagar Road Hyderabad.(Telangana State).

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Abstract: In this Clinico-mycological study of 200 randomly selected cases of dermatophytoses was undertaken in Shadan institute of medical science teaching hospital and research centre, Himayath sagar road Hyderabad (Telangana state). Among the *Dermatophytosis tinea cruris* (35%) was the major clinical type followed by tinea cruris with tinea corporis (19%) and tinea corporis alone (19%). Incidence of tinea capitis was 4.5% and all of those affected were in the age group of 0-10 years. Male preponderance was observed (M: F=2.03:1). *Trichophyton rubrum* was the predominant isolate in the present study isolated in majority (59.16%) from all clinical types followed by *Trichophyton mentagrophytes* (27.5%).

Keywords: dermatophytoses, tinea cruris, tinea corporis.

INTRODUCTION

Cutaneous fungal infections have been reported worldwide as being one of the most common human infectious diseases in clinical practice. In spite of therapeutic advances in the last decades, the prevalence of cutaneous mycoses is still increasing [1].

MATERIALS AND METHODS

The study was conducted on 200 clinically diagnosed cases of dermatophytoses attending Skin, STD and Leprosy OPD of Shadan institute of medical science teaching hospital and research centre, Himayath sagar road, Hyderabad (Telangana state) during the period of July 2015 to December 2015. Mycological study conducted on each case included:

1. Direct KOH preparation of specimen obtained by scraping, epilated hair and nail clippings where needed, for demonstration of fungal elements.

2. Culture of specimen on Sabouraud's agar with chloramphenicol and actidione. The isolated fungi were identified by their Colony characters and microscopic morphology of elements in the lesion macroconidia, microconidia and hyphae.

RESULTS

Patients were divided into six age groups; <10, 11-20, 21-30, 31-40, 41-50 and >50 year of age. The largest number of patients in our study, 119 (59.5%), were in the 21-30 year age group followed by 30-40 year age group (15%),30-40 year age group (15%), 40-50 year age group (11%), >50 year age group 12(6%) ,< 10 year age group (5%).(Table 1).

The ratio of male cases to female cases was 2.03:1. (Figure 1)

TABLE 1: Age-wise distribution of cases

Age group	<10	10-20	20-30	30-40	40-50	>50
Number of patients with percentages	10 (5%)	7(3.5%)	119(59.5%)	30(15%)	22 (11%)	12 (6%)

The distribution of cases according to site of lesion i.e., according to clinical types is Tinea cruris majority i.e., 70 (35%) patients; followed by tinea corporis with corporis 38 (19.0%); Tinea corporis 38 (19.0%);

tinea manuum 21(10.5%); tinea pedis 12 (6.0%); tinea capitis 9 (4.5%); tinea unguium 8 (4%); tinea faciei 4 (2.0%). (Table 2)

TABLE 2: Distribution of cases according to site of involvement

Clinical variants	Tinea capitis	Tinea faciei	Tinea corporis	Tinea manuum	Tinea cruris	Tinea pedis	Tinea unguium	Tinea cruris with corporis
percentage	9(4.5%)	4(2.0%)	38(19%)	21(10.5%)	70(35%)	12(6.0%)	8(4%)	38(19%)

Fungal elements (hyphae and/or arthrospores) could be demonstrated in scrapings from 128 out of 200 cases (64%). Culture positivity was seen in 120 out of 200 cases (60%) (Table 3). Among the KOH positive

cases culture positivity was seen in 109 cases (85.15%) and 19 cases were culture negative (14.85%). This was a significant association ($p < 0.001$).

TABLE 3: The species of dermatophytes isolated from various clinical sites

Culture organism	T. rubrum	T. mentagrophyte	T. violaceum	M. audouinii	M. canis	T. tonsurans
Percentage	71(59.16%)	33(27.5%)	9(7.5%)	4(3.33%)	2(1.66%)	1(0.83%)

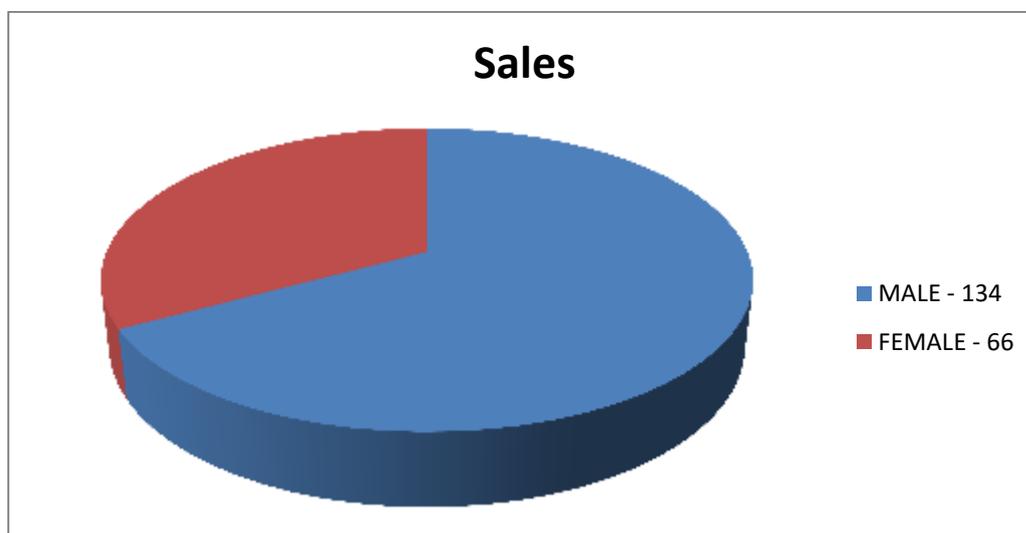


Fig-1: Gender-wise distribution of the patients



Fig-2: *Tinea cruris* in a 30 year old male patient



Fig-3: *Tinea capitis* in a 7 year old child



Fig-4: *Trichophyton rubrum* on culture

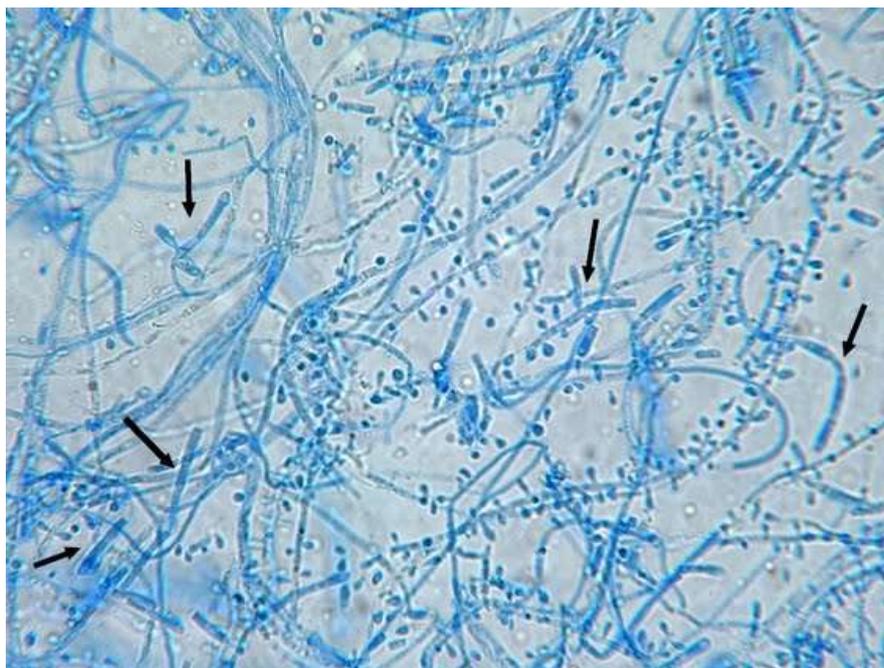


Fig-5: *Trichophyton rubrum*- LCB mount

DISCUSSION

In the present study most of the dermatophyte infections (59.5%) were found in the adult age group of 21-30 years. Other studies have also found 21-30 years age group as the commonest group affected [2, 3, 4]. Male preponderance (2.03:1) was observed in our study like others [3, 5]. Patients were divided into six age groups; <10, 11-20, 21-30, 31-40, 41-50 and >50 year of age. The largest number of patients in our study, 119 (59.5%), were in the 21-30 year age group. Similar

results were seen by other authors [6, 7]. Males 134 (67%) outnumbered females 66 (33%) which is similar to other studies [8,9]. Tinea cruris as the main clinical variety in our study is in agreement with several other Indian studies [3,10,11]. However, many other Indian studies have reported tinea corporis as the commonest clinical variety [12, 13, 14]. In the present study we also found all the patients affected with tinea capitis were children of 0-10 years age group with males more commonly affected. The high frequency in males could

be due to the custom of regular application of vegetable oils over the scalp of female which has fungi static properties [15]. Out of 4 cases (2%) of tinea faciei reported in this study, 2 cases with tinea faciei had tinea capitis also. Fungus identification by KOH Mount was positive in 64% cases; however culture positivity was observed only in 60%. *Trichophyton rubrum* was the prime isolate in present study which is in agreement with other studies from India [16, 17], however *Trichophyton violaceum* was the major isolate in study done by Karmakar [18]. An interesting feature of this study was that *Trichophyton violaceum* was isolated from all the cases of tinea capitis, this is in agreement with other Indian studies, who have either found 100% isolation [19, 20] of *Trichophyton violaceum* or it as predominant isolate [21, 22]. Sharma *et al.*; [14] from Jaipur found *Microsporum gypseum*; Dalai *et al.*; [13] from Udaipur found *Trichophyton mentagrophyte* and Murdia [23], from Udaipur found *Trichophyton rubrum* as the main causative fungus of tinea capitis.

CONCLUSION:

To conclude, the present study shows that tinea cruris is the most common clinical type of dermatophytosis and *Trichophyton rubrum* is the most common isolate in this part of Telangana state.

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