

ORIGINAL RESEARCH

Evaluation of Clinical Profile of Dermatophytosis

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ABSTRACT:)

Background: Skin infections due to dermatophytes have become a significant health problem affecting all age groups. The present study was conducted to evaluate clinical profile of dermatophytosis. **Materials & Methods:** The present study was conducted in the department of Dermatology. It comprised of 245 cases of dermatophytosis of both genders. Fungal scrapings from these patients were obtained and processed. **Results:** Maximum cases were seen in age group 20-30 years (110) followed by 30-40 years (65), 10-20 years (40), 0-10 years (13), 40-50 years (12) and >50 years (5). The difference was significant ($P < 0.05$). Most common clinical presentation was Tinea corporis seen in 145 cases, T. cruris in 62, T. faciei in 24, T. capitis in 10 and T. unguium in 4. The difference was significant ($P < 0.05$). **Conclusion:** Authors found that most common clinical presentation was Tinea corporis, T. cruris, T. faciei, T. capitis and T. unguium.

Key words: Dermatophytosis, Fungal, Tinea corporis.

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INTRODUCTION

Skin infections due to dermatophytes have become a significant health problem affecting all age groups. The dermatophytes are hyaline septate molds with more than 100 species described. Nearly 40 % of these are associated with human disease. According to Emmon's morphological classification, the dermatophytes are classified into three anamorphic genera - Trichophyton, Microsporum and Epidermophyton based on conidial morphology.¹

The dermatophytes are closely related keratinophilic fungi that cause dermatophytosis. Their keratinophilic nature allows them to degrade keratin and thus invade skin, hair and nails. The dermatophytes capable of reproducing sexually belong to the genus Arthroderma in the family Arthrodermataceae. Physiologically, dermatophytes are distinct because of their ability to tolerate high concentrations of cycloheximide and by their ability to utilize proteins as the sole source of carbon.²

Recurrent dermatophytosis is cutaneous dermatophytosis in which the infection recurred within 6 weeks of stopping the adequate antifungal treatment with at least two such episodes in last 6

months.³ The resistance to treatment may be due to use of over the counter (OTC) topical steroids or due to host factors such as noncompliance and immunosuppression. There have been reports of antifungal resistance also for commonly used antifungals fluconazole and terbinafine.⁴ The present study was conducted to evaluate clinical profile of dermatophytosis.

MATERIALS & METHODS

The present study was conducted in the department of Dermatology. It comprised of 245 cases of dermatophytosis of both genders. All were informed regarding the study. Ethical approval was obtained from institute prior to the study. General information such as name, age, gender etc. was recorded. Fungal scrapings from these patients were obtained and processed. Direct KOH mount was done for all the specimens and culture was done in Sabouraud's dextrose agar, containing chloramphenicol (0.04gms/litre) and cycloheximide (0.5g/litre) was. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Age wise distribution of patients

Age group (Years)	Number	P value
0-10	13	0.01
10-20	40	
20-30	110	
30-40	65	
40-50	12	
>50	5	

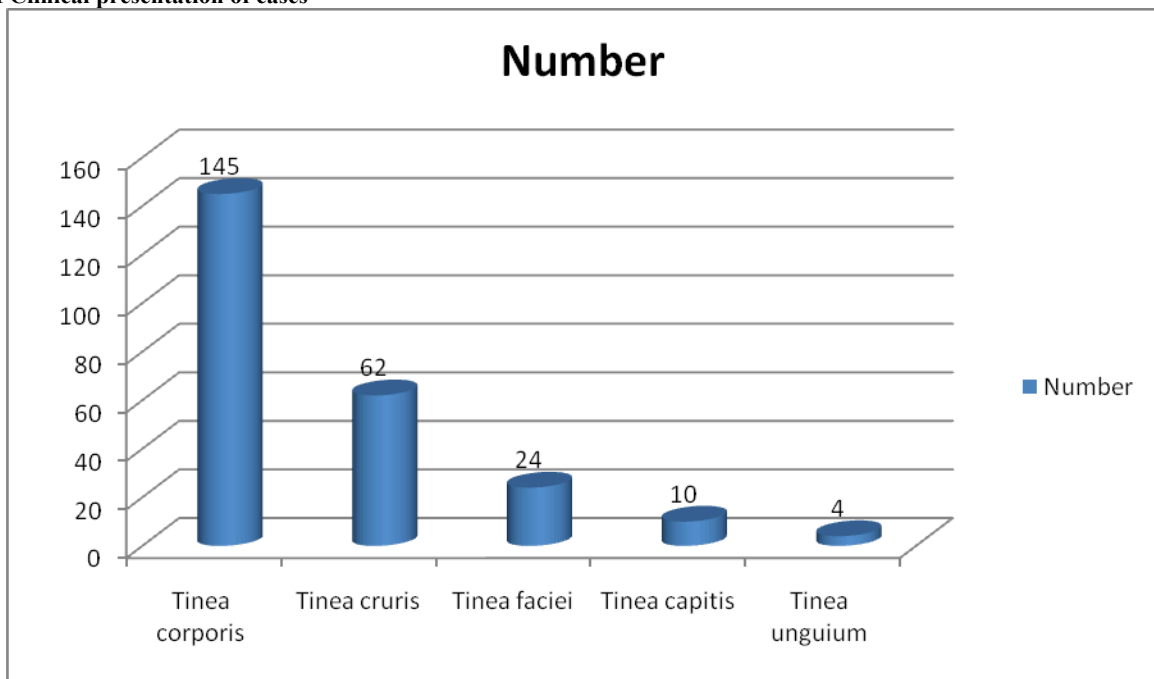
Table I shows that maximum cases were seen in age group 20-30 years (110) followed by 30-40 years (65), 10-20 years (40), 0-10 years (13), 40-50 years (12) and >50 years (5). The difference was significant (P< 0.05).

Table II Clinical presentation of cases

Diagnosis	Number	P value
Tinea corporis	145	0.02
Tinea cruris	62	
Tinea faciei	24	
Tinea capitis	10	
Tinea unguium	4	

Table II, graph I shows that most common clinical presentation was Tinea corporis seen in 145 cases, T. cruris in 62, T. faciei in 24, T. capitis in 10 and T. unguium in 4. The difference was significant (P< 0.05).

Graph I Clinical presentation of cases



DISCUSSION

The dermatophytes manifest as infections of keratinized tissue like skin, hair, nails etc., of humans and animals.⁵ Some species of dermatophytes are endemic in certain parts of the world and have a limited geographic distribution. T. soudanense, T. gourvilii and T. yaoundii are restricted to Central and West Africa. T. concentricum is confined to islands in the South pacific. The increasing mobility of the world’s population is disrupting several

epidemiological patterns. Some dermatophytes like E. floccosum, T.rubrum and T .tonsurans are globally distributed.⁶ The present study was conducted to evaluate clinical profile of dermatophytosis.

In this study, we included 245 patients and maximum cases were seen in age group 20-30 years (110) followed by 30-40 years (65), 10-20 years (40), 0-10 years (13), 40-50 years (12) and >50 years (5).

Sudha et al⁷ conducted an observational cross sectional study on 1000 patients attending outpatient department of Government Rajaji Hospital, Madurai to check the prevalence of dermatophytosis. Clinically the prevalence of dermatophytosis was 13%, it was observed more in males. *T.rubrum* was the commonest species of dermatophyte isolated, which presented as *Tinea corporis*. This study focused on the variations in dermatophytosis presentation and the species involved and found that *Trichophyton rubrum* was the most common affecting the present population.

We found that most common clinical presentation was *Tinea corporis* seen in 145 cases, *T. cruris* in 62, *T. faciei* in 24, *T. capitis* in 10 and *T. unguium* in 4. Vineetha et al⁸ found that chronic dermatophytosis was seen in 68%; *tinea corporis* was the most common presentation; topical steroid application was seen in 63%; azoles were the most common antifungals used; varied morphologies such as follicular and nonfollicular papules, arciform lesions, pseudoimbricata were seen in steroid modified *tinea*. *Trichophyton rubrum* and *Trichophyton mentagrophytes* were the most common species isolated in culture, but rare species such as *Trichophyton tonsurans*, *Trichophyton schoenleinii*, *Epidermophyton floccosum*, and *Microsporum audouinii* were also isolated from chronic cases. Histopathology showed perifolliculitis in steroid modified *tinea*. Minimal inhibitory concentration was lowest for itraconazole in susceptibility studies. Partha et al⁹ conducted a study which aimed to establish the identity of fungal isolates from clinically suspected cases of dermatophytosis and to correlate the occurrence of dermatophytosis with clinico-epidemiological profile of patient. A total of 372 samples from patients attending outpatient department from March 2010 to May 2011 were included in the study. A brief clinical history was obtained from the patients and samples were collected and processed as per standard protocol. The most common dermatophyte was *Trichophyton rubrum* (12.1%) whereas *Aspergillus niger* (5.6%) was the commonest isolate among non-dermatophyte. Among clinical forms, majority of the patients had *tinea corporis* (55.3%). Dermatophytosis was found to be more prevalent in young adults (21-30 years). Culturing specimen on Sabouraud Dextrose Agar (SDA) with antibiotics was found to be the best method for diagnosis and this medium proved to be better than DTM.

CONCLUSION

Authors found that most common clinical presentation was *Tinea corporis*, *T. cruris*, *T. faciei*, *T. capitis* and *T. unguium*.

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