

To Assess Clinical Profile of Patients with Dermatophytosis Infection

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Abstract

Background: The distribution of dermatophyte infections and their causative agents varies with geographical region. The present study was conducted to assess clinical profile of patients with dermatophytosis infection.

Materials & Method: The present study was conducted on 86 patients of both genders. In all patients, a through clinical examination was performed. The skin specimen was taken for histopathological examination.

Results: Out of 86 patients, males were 34 and females were 52. Type was T. corporis in 24, T. cruris in 14, T. manuum in 2, T. unguium in 13, T. Faceii in 12, T. capitis in 11 and T. pedis in 10. The difference was significant ($P < 0.05$).

Conclusion: Dermatophytosis is common in skin disorder seen all age groups especially adults. Most common was T. corporis followed by T. cruris and T. manuum.

Key words: Dermatophytosis, Skin, Geographical.

Introduction

Dermatophytoses is a superficial infection caused by a group of fungi, dermatophytes. The distribution of dermatophyte infections and their causative agents varies with geographical region and is influenced by a wide range of factors, such as type of population, climatic factors, lifestyle, migration of people, cultural practices and socioeconomic conditions, incidence of peculiar comorbidities and drug therapy.¹

Dermatophytes comprise of three major genera, Trichophyton, Microsporum and Epidermophyton, of the class hyphomycetes and division deuteromycota. They are keratinophilic in nature and have the ability to colonize keratinized non-living tissues such as skin, hair and nail in human and animals. The infection spreads

easily by direct contact from infected humans and animals or through fomites.²

The infection is common world-wide with higher prevalence in tropical countries. The dermatophytoses infection is commonly referred as ringworm due to the appearance of the lesion. Despite the increasing incidence of recurrent dermatophytosis, information on the extent of the burden in our country is scarce.³

Dermatophytosis is currently a disease of worldwide importance and a public health problem in many parts of the world particularly in developing countries.⁴ Although the disease hardly causes death, it is a common refractory infection deleteriously affecting the quality of life via social stigma and upsetting day-to-day activities.⁵ Large population size, low socioeconomic status, inadequate health facilities, and exchanging of foot-wears, clothes, and barber shop materials among people in developing nation have been recognized as potential risk factors for the proliferation of the disease.⁶ The present study was conducted to assess clinical profile of patients with dermatophytosis infection.

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Materials & Method

The present study was conducted in the Department of Dermatology, Krishna Institute of Medical Sciences Deemed to be University, Karad.

It comprised of 86 patients of both genders. The study was approved from institutional ethical committee. All participants were informed regarding the study and written consent was obtained.

Data related to participants such as name, age, gender etc. was recorded. In all patients, a thorough clinical examination was performed. The skin specimen was taken for histopathological examination. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

Results

Table I Distribution of participants

Total- 86		
Gender	Males	Females
Number	34	52

Table I shows that out of 86 patients, males were 34 and females were 52.

Table II Type of dermatophytosis

Type	Number	P value
Tinea corporis	24	0.01
Tinea cruris	14	
Tinea manuum	2	
Tinea unguium	13	
Tinea faceii	12	
Tinea capitis	11	
Tinea pedis	10	

Table II shows that type was T. corporis in 24, T. cruris in 14, T. manuum in 2, T. unguium in 13, T. Faceii in 12, T. capitis in 11 and T. pedis in 10. The difference was significant ($P < 0.05$).

Discussion

The epidemiology of dermatophytoses in developed countries has also exhibited notable changes over the past decades as a consequence of variation in some environmental conditions, and the distribution of the etiological agents usually reflects the changing clinical patterns of dermatophytoses.⁷ 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.⁸ The present study was conducted to assess clinical profile of patients with dermatophytosis infection.

In this study, clinical profile of patients with dermatophytosis infection was assessed.

We found that out of 86 patients, males were 34 and females were 52. Type was T. corporis in 24, T, cruris in 14, T. manuum in 2, T. unguium in 13, T. Faceii in 12,

T. capitis in 11 and T. pedis in 10.

Mahajan et al⁹ conducted a study in which one hundred and fifty patients with recurrent dermatophytosis were enrolled. Recurrent dermatophytosis was seen in 9.3% of all patients with dermatophytosis in this study. Trichophyton mentagrophytes was the most common species identified (36 patients, 40%) samples followed by T. rubrum (29 patients, 32.2%). In-vitro antifungal susceptibility testing showed that the range of minimum inhibitory concentrations (MIC) on was lowest for itraconazole (0.015–1), followed by terbinafine (0.015–16), fluconazole (0.03–32) and griseofulvin (0.5–128) in increasing order.

Lakshmanan et al¹⁰ conducted a study in which Tinea capitis was the predominant clinical manifestation consisting of 48.1% of the cases. Among 153 patients with tinea capitis, 73.2% were in the age group of 1-14 years. Of 318 study participants, 213 (67.98%) were found to be positive for dermatophytosis microbiologically. Out of 164 fungal isolates, 86 were dermatophytes and 78 were non-dermatophyte fungi. Among 86 dermatophytes, T. violaceum represented 38.4% of dermatophyte isolates and 89.7% of the isolates were recovered from tinea capitis. Of 76 non-dermatophyte molds, Aspergillus spp., Scytalidium dimidiatum, and Cladosporium spp. were the most common isolates, respectively.

Senthamilselvi et al¹¹ found that out of total 150 subjects, most common clinical type of dermatophytosis, identified in our study, was tinea corporis in 53 (35.3%) subjects followed by tinea cruris in 34 (22.6%) subjects. 134 (89.3%) subjects were tested positive by direct microscopy (KOH mount) and 69 (46.0%) by culture. Highest KOH mount positivity was seen in patient suffering from tinea corporis (94.3%) followed by tinea cruris (94.1%).

Pathania et al¹² found that the most frequent clinical forms were tinea unguium (39.2% of the total dermatophytoses), tinea corporis (22.7%) and tinea pedis (20.4%). There was a predominance of women for tinea unguium and corporis and of men for tinea pedis and especially tinea cruris. T. rubrum was the prevalent causative agent, implicated in 64% of total cases, followed by M. canis (14%) and T. mentagrophytes (10%). In parallel with this changing pattern, the frequency of isolation of T. rubrum has shown a continuous increase during the last 35 years, whereas a progressive decline of the etiological role of T. violaceum, M. canis and

even more of E. floccosum has been noted.

Conclusion

Dermatophytosis is common in skin disorder seen all age groups especially adults. Most common was T. corporis followed by T. cruris and T. manuum.

Ethical Clearance- Taken from Institutional Ethical committee

Source of Funding- Self

Conflict of Interest - nil

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