

Evaluation of Clinical Profile of Superficial Dermatophytosis Patients Visiting Dermatology OPD of a Tertiary Care Hospital of South India

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ABSTRACT

Background: Superficial dermatophytosis, commonly known as ringworm, is a fungal infection affecting skin, hair, and nails. Dermatophytes thrive in warm, humid environments, contributing to uneven geographic distribution.

Objectives: To evaluate clinical profile of superficial dermatophytosis patients visiting dermatology OPD of a tertiary care hospital of South India.

Materials and Methods: This prospective, comparative study enrolled 200 patients (≥ 18 years) diagnosed with superficial dermatophytosis from the dermatology outpatient department. Inclusion criteria consisted of positive 10% KOH mount for fungus. Exclusion criteria included pregnant females, patients under 18 years, negative KOH mount, and extensive disease.

Results: Demographic analysis revealed a diverse age distribution, with 31-40 years being the most affected (34%). Male preponderance was observed. Lesion distribution varied across body sites, with groins (65%) and buttocks (54%) being most commonly affected. Other frequently affected areas included face (15%), trunk (9%), legs (9%), and axilla (17%).

Conclusion: This study provides valuable insights into the

demographic and clinical characteristics of superficial dermatophytosis. The findings highlight the importance of awareness, early diagnosis, and targeted treatment strategies to combat this common fungal infection.


Keywords: Superficial Dermatophytosis, Ringworm, Fungal Infection, Demographic Analysis, Clinical Profile.

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INTRODUCTION

The dermatophytes are a group of closely related fungi capable of invading keratinized tissues (skin, hair, and nails) of humans and animals, causing dermatophytosis, commonly known as ringworm. Since the fungus cannot penetrate deeper tissues or organs of immunocompetent hosts, the infection is often cutaneous and limited to the non-living cornified layers.¹ The cutaneous mycoses, mainly caused by dermatophyte fungi, are among the most common fungal infections worldwide, affecting several age groups and adversely affecting the quality of life of infected patients.²

The reactions to dermatophyte infections can range from moderate to severe, depending on the host's responses to the fungus's metabolic products, the virulence of the infecting strain or species, the anatomic location of the infection, and local environmental conditions. These infections are also termed tinea infections. Dermatophytes are filamentous fungi that invade and feed on keratinized tissues like skin, hair, and nails, causing an infection.¹

Globally, dermatophytosis exhibits distinct infection patterns, contributing to its uneven geographic distribution. In tropical regions, warmth and humidity are the primary factors promoting dermatophytosis development.³ The present study aimed to evaluate clinical profile of superficial dermatophytosis patients visiting dermatology OPD of a tertiary care hospital of South India.

MATERIALS AND METHODS

The present study was conducted in the dermatology OPD among 200 patients diagnosed with superficial dermatophytosis. Prior to commencement, ethical clearance was obtained from the institutional ethical committee, and informed written consent was secured from all participating patients.

The study population comprised patients aged 18 years and above, with a positive 10% KOH mount for fungus. Specifically, inclusion criteria consisted of patient consent, age ≥ 18 years, positive fungal KOH mount. Conversely, exclusion criteria

included pregnant females, patients under 18 years, negative KOH mount,

The present study evaluated a range of variables associated with superficial dermatophytosis, providing a comprehensive understanding of the disease's characteristics. The assessed variables included demographic factors (age and gender), clinical features (duration, type of tinea, and location of tinea), and treatment-related factors (past history of steroid use and anti-fungal drug administration). These variables were examined to

identify potential correlations, trends, and outcomes in patients diagnosed with superficial dermatophytosis.

Sample collection procedure: Patients were evaluated by 10% KOH MOUNT by taping method – by applying cellophane tape over the skin lesion pressing firmly, removing it and sticking to sterile glass slide over which 3-4 drops of 10% KOH solution was placed and observed under microscope.

Frequency and percentage for qualitative data was applied after data was collected.

Table 1: Age group wise distribution of study subjects in the groups

Age	Frequency (n=200)	Percent
<20	9	4.5%
21-30	34	17%
31-40	68	34%
41-50	51	25.5%
51-60	27	13.5%
>60	11	5.5%
Total	200	100

Table 2: Gender wise distribution of study subjects in the groups

Gender	Frequency	Percent
Female	81	40.5%
Male	119	59.5%

Table 3: Site of lesion wise distribution of study subjects in the groups

Site of lesion	Frequency (n=200)	Percent
Face	30	15
Buttocks	108	54
Groins	130	65
Thighs	4	2
Hands	10	5
Trunk	18	9
Foot	8	4
Legs	18	9
Axilla	34	17
Neck	14	7
Arms	14	7
Inframammary	42	21

RESULTS

The study's demographic analysis (table 1) revealed a diverse age distribution among the 200 participants. The youngest age group, below 20 years, accounted for 4.5% (n=9) of the subjects. The 21-30 year age range comprised 17% (n=34) of the participants, while the 31-40 year age group formed the largest proportion at 34% (n=68). The 41-50 year age range accounted for 25.5%

(n=51) of the subjects, followed by the 51-60 year age group at 13.5% (n=27). The oldest age group, above 60 years, represented 5.5% (n=11) of the study population. Table 2 shows male preponderance. The distribution of lesions (table 3) among the 200 study subjects revealed varying frequencies across different body sites. The most commonly affected areas were the groins (65%, n=130) and buttocks (54%, n=108), indicating a predilection

for genital and gluteal regions. The face was affected in 15% (n=30) of cases, while the trunk (9%, n=18), legs (9%, n=18), and axilla (17%, n=34) were also frequently involved. Less commonly affected sites included the hands (5%, n=10), feet (4%, n=8), thighs (2%, n=4), arms (7%, n=14), and neck (7%, n=14). Notably, the inframammary region was affected in 21% (n=42) of cases.

DISCUSSION

In our study of superficial dermatophytosis, we observed a wide age range among the 200 affected patients. Notably, the disease affected individuals across various life stages, with 4.5% of patients being younger than 20 years (n=9). The majority of cases were found in adults, with 17% (n=34) in the 21-30 year age group and a significant 34% (n=68) in the 31-40 year age group. Middle-aged individuals accounted for 25.5% (n=51) of the cases, belonging to the 41-50 year age group. Additionally, 13.5% (n=27) of patients were between 51-60 years old, and 5.5% (n=11) were above 60 years old. This age distribution suggests that superficial dermatophytosis can affect individuals at any age.

The mean age distribution in this study indicates that dermatophytosis is most common in the third decade of life. The majority (60%) of patients were in the 21-40 year age group. This observation aligns well with studies conducted by Prasad PV et al⁴. A similar study by Sudha M et al⁵ reported a notable trend emerged in the demographic analysis of dermatophytosis cases. The 31-40 year age group accounted for the highest proportion of cases, with a significant 40.76% of patients falling within this range. Furthermore, a gender disparity was observed among the 130 analyzed samples, revealing a predominance of males (62.3%, n=81) over females (37.7%, n=49).

The average age of patients with a diagnosis of dermatophytosis varies widely by study and region. In a 2010 study, Araújo et al. found that patients aged 0-20 years accounted for nearly half of all cases of dermatophytosis.⁶ Calado et al. found an average age of 47 years.⁷ The high incidence of dermatophytosis among 31-40-year-olds can be attributed to their active lifestyle, characterized by increased physical activity and consequent excessive perspiration, creating an ideal environment for dermatophyte growth. As this age group largely comprises the working population, their occupational and social engagements heighten their exposure to fungal infections. Moreover, the social stigma surrounding localized dermatophytosis may drive younger patients to seek dermatological care more promptly, potentially contributing to the observed demographic distribution. Males constituted the majority of patients. This gender disparity might be attributed to males being more engaged in outdoor activities compared to females, who are often homemakers, particularly in developing countries like India. In a study of 200 patients with superficial dermatophytosis, lesions exhibited a varied distribution across different body regions. Prominently, the disease showed a strong predilection for genital and gluteal areas, with 65% (n=130) of lesions occurring in the groins and 54% (n=108) on the buttocks. Facial involvement was observed in 15% (n=30) of cases. Other frequently affected sites included the trunk, legs, and axilla, each accounting for 9% (n=18), 9% (n=18), and 17% (n=34) of cases, respectively. Less common sites of involvement were the hands (5%, n=10), feet (4%, n=8), thighs (2%, n=4), arms (7%, n=14), and neck (7%, n=14). The inframammary region was affected in a

significant 21% (n=42) of patients. Treatment of dermatophytosis is generally a long and onerous process, typically involving the use of antifungal agents of the allylamine class (such as terbinafine) and the azoles (ketoconazole, miconazole, oxiconazole). Most infections can be managed with topical therapy alone; however, in an attempt to increase the cure rate, topical and systemic (oral) medications are often combined.⁸

CONCLUSION

In conclusion, this study demonstrates that superficial dermatophytosis affects a broad age range, with males predominantly affected. Lesions frequently occur in genital and gluteal regions, as well as other body sites. These findings highlight the importance of awareness, early diagnosis, and targeted treatment strategies to combat this common fungal infection.

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