ORIGINAL RESEARCH PAPER INTERNATIONAL JOURNAL OF PURE MEDICAL RESEARCH

Dermatology

KEYWORDS:
dermatophytosis, KOH mount, anti-fungals, dermatophytes.

A CLINICO-MYCOLOGICAL EVALUATION OF DERMATOPHYTIC INFECTIONS IN KOLHAPUR

Volume-4, Issue-10, October - 2019 ISSN (O): 2618-0774 | ISSN (P): 2618-0766

Dr. Saba Aziz Mhate Post- Graduate Student, Deaprtment Of Dermatology, Venereology & Leprosy, D.Y. Patil Medical College & Hospital, Kolhapur *Corresponding Author sabamhate20@gmail.com

Dr. Ranjit V Ranade* Professor & Head of Department, Studtent, Deaprtment of Dermatology, Venereology & Leprosy, D. Y. Patil Medical College & Hospital, Kolhapur

Article History
Received: 18.06.2019
Accepted: 29.07.2019
Published: 10.10.2019

ABSTRACT:

Introduction- Dermatophytes are the most vital fungi due to their extensive involvement of population at large and their prevalence globally, especially in the tropical and subtropical nations like India.

Material & methods- The present study is a cross sectional study, conducted on 110 patients with dermatophytic infection. KOH mount & fungal culture study was done to identify the causative dermatophyte in each case.

Results- 75.45% of patients were males while 24.55% were females, 40.91% were in age group of 21 to 40 years, 27.27% were students and 32.73% were manual laborers.

In this study 44.55% of Tinea Corporis and 19.09% of tinea cruris were the most commonly seen clinical variants followed by 11.81% of mixed type and 7.27% of Tinea Pedis. Family history was positive in 47.27% patients. 51.82% patients belonged to lower socioeconomic class, 27.27% to middle socioeconomic class & 20.91% to high socioeconomic. 66.36% of the cases were KOH positive while culture positivity was obtained only in 35.45%. Trichophyton Rubrum (25.45%) was the commonest species isolated followed by Trichophyton Mentagrophytes (7.27%).

Conclusion:- In our study Tinea corporis was the most commonly seen variant and Trichophyton rubrum was the most common isolate. Most patients belonged to low socio-economic class. KOH positivity was more than culture positivity

INTRODUCTION

Fungal infections of the skin and nails are a common global problem. The high prevalence of superficial mycotic infections shows that 20-25% of the world's population has skin mycoses making these one of the most frequent forms of infection. [1]. Dermatophytes are assuming greater significance both in developed and developing countries particularly due to the advent of immunosuppressive medication and disease. Dermatophytic infections have a typical presentation, but are often confused with other skin disorders, which makes confirmation by laboratory diagnosis essential.

OBJECTIVES

This study was undertaken to study epidemiological profile of dermatophytic infections, their clinical types, to co-relate between the etiological agent isolated and the clinical type of dermatophytic infection & to co-relate between clinical diagnosis, results of KOH mount & culture study mosquitoes that may carry disease. Tyre pile fires have been an even greater environmental problem.

EXCLUSION CRITERIA

Patients already on treatment for fungal infection, Patients recently treated with antifungals or topical steroids, patients having co-morbities like Diabetes Mellitus, thyroid or parathyroid disorders or other chronic diseases, Immunocompromised or immunosuppressed patients, patients having secondary pyoderma, deep or subcutaneous fungal infection & patients unwilling to give consent were excluded from this study.

OBSERVATIONS & RESULTS

In the present study most commonest age group affected belonged to 21-40 years (40.91%) followed by 41-60 years (31.82%), <20 years (18.18%) and >60 years (9.09%) Males (75.45%) were more commonly affected than females (24.55%).56.36% (62 patients) were from rural background and 43.64% (48 patients) were from urban background.

The most common clinical type seen was Tinea corporis (44.55%), followed by Tinea cruris(19.09%), mixed type (11.81%), Tinea faciei(10%), Tinea pedis (7.27%), Tinea unguium (2.73%), Tinea manuum (2.73%), Tinea capitis (1.82%).

Table 1:Clinical types among the study population

Clinical types	Frequency	Percentage
Tinea Capitis	2	1.82%
Tinea Cruris	21	19.09%
Tinea Corporis	49	44.55%
Tinea Pedis	8	7.27%
Tinea Manuum	3	2.73%
Tinea Faciei	11	10%
Tinea Unguium	3	2.73%
Mixed	13	11.81%
Total	110	100%

In this study dermatophytosis was found in 36 manual labourers (32.73%), 17 Household workers (15.45%), 16 sedentary workers (14.55%), 20 students (27.27%) and 11 people with other occupations.

Table 2: Isolate obtained

Isolate	Frequency	Percentage
Trichophyton Mentagrophytes	8	7.27%
Trichophyton Rubrum	28	25.45%
Microsporum Audounii	1	0.91%
Trichophyton Schoenleinii	1	0.91%
Epidermophyton Floccosum	1	0.91%
Fusarium	1	0.91%
Not known	70	63.64%
Total	110	100%

In this study, the commonest isolate obtained was Trichophyton Rubrum (25.45%) followed by Trichophyton Mentagrophytes (7.27%), Epidermophyton Floccosum (0.91%), Trichophyton Schonleinii (0.91%), Microsporum Audounii (0.91%) & the non dermatophyte Fusarium (0.91%).

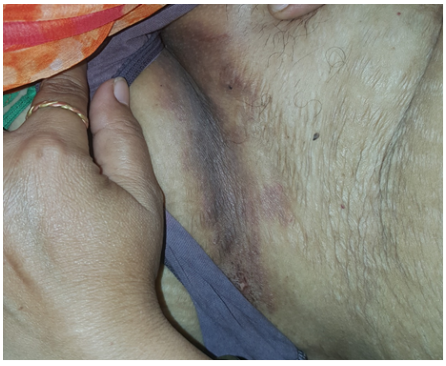

Figure 1: Tinea cruris

DISCUSSION

Lakshmanan et al [2] in their study showed that predominant age group that was affected was 22 to 45 years & majority (56%) were males, 78% patients had T. corporis, 10% had T cruris, etc.

Kaur R et al [3] in their study showed that commonest age group was 21-30 years (23.3%) & majority were males (67.2%), frequency of patients from urban areas (81.5%) was more than that in rural areas (18.5%).

A similar study was conducted by Balakumar S, Rajan S, Thirunalasundari T, Jeeva S [49] in Tamil nadu, India. A total of 519 samples were collected from nails, skin and hair for one year. The results of this study showed that dermatophytosis was more common in the age group of 11-20 and 21-30 years; Tinea corporis (35.4%) was the predominant clinical condition followed by Tinea cruris (16.8%) and Tinea capitis (16.7%); Tinea capitis was common in children below 12 years; males (67.1%) were more commonly affected as compared to females; presence of dermatophytes was reported in 70% of the samples and T. rubrum was the predominant pathogen followed by T. mentagrophyte [4].

CONCLUSIONS

In the present study, majority of cases of Dermatophytosis belonged to the age group of 21-40 years. Males were more commonly affected than females. Male to female ratio was 3:1. Tinea corporis was found to be the commonest clinical type followed by Tinea cruris. Trichophyton rubrum was the commonest isolate obtained.

REFERENCES:

[1] Havlickova B, Czaika VA, Friedrich M. Epidemiological trends in skin mycoses worldwide. Mycoses. 2008 Sep 1;51(s4):2-15.
[2] Lakshmanan A, Ganeshkumar P, Mohan SR, Hemamalini M, Madhavan R. Epidemiological and clinical pattern of dermatomycoses in rural India. Indian journal of medical microbiology. 2015 Feb 1;33(5):134.
[3] Kaur R, Panda PS, Sardana K, Khan S. Mycological pattern of dermatomycoses in a tertiary care Hospital. Journal of tropical medicine. 2015 Sep 30;2015:157828..
[4] García-Romero MT, Arenas R. New insights into genes, immunity, and the occurrence of dermatophytosis. The Journal of investigative dermatology. 2015 Mar 1;135(3):655.