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Original Article

Analysis Of Superficial Fungal Infection In Study Population- A Clinical Study

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ABSTRACT:

Introduction- There is variety of skin infection affecting large amount of population. Fungal infection, bacterial and viral infections are common among different age groups. The present study was conducted to assess the cases of fungal infection in study population. **Materials & Methods-** The present study was conducted on 580 cases of fungal infection of both genders. General information such as name, age, gender, location and types of fungal infection was noted. In all patients, clinical examination was done and to confirm the diagnosis scrapping were taken which were fixed with 10- 20% KOH culture in Sabouraud Dextrose Agar with chloramphenicol. **Results-** Out of 580 cases, males were 220 and females were 360. The difference was non- significant (P- 0.5). 150 males and 260 females had candidiasis, 50 males and 70 females had dermatophytic infection and 20 males and 30 females had tinea versicolor infection. The difference was significant (P- 0.05). Maximum cases were seen in age group 20- 30 years (males- 110, females- 230) followed by 30- 40 years (males- 50, females- 60), 11- 20 years (males- 35, females- 40). The difference was significant (P- 0.01). **Conclusion-** Author found that superficial fungal infections are commonly seen in females and age group 20- 30 years had maximum number of cases.

Key words- Candidiasis, Fungal infection, Superficial

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INTRODUCTION

There is variety of skin infection affecting large amount of population. Fungal infection, bacterial and viral infections are common among different age groups. Fungal infection can be superficial and deep. Superficial fungi skin infections are fungal diseases affecting primarily, the skin, the mucous membranes, nails and hair. These may involve esophageal, oropharyngeal, vulvovaginal and urethral membranes. Dermatophytosis, tinea versicolor and candidiasis are the most common types of superficial fungi skin infections and the tinea negra and tinea piedra are least common one.¹ There is variation in geographical distribution of cases and it shows age and gender specification. Fungal infection in children demands careful assessment of cases. Skin infection may poses difficulty in doing day to day activity and therefore early intervention and prompt diagnosis is of paramount importance.² These fungi grow frequently on those areas of the skin that are warm, dark and moist. Dermatophytes are parasitic fungi that infect the skin and cause

infections of the skin, hair and nails because of their ability to obtain nutrients from keratinized material. Candidiasis is a common occurring fungal infection. This may involve oral cavity and skin. This can be acute or chronic. Acute is further divided into acute pseudomembranous with pseudomembrane which can be easily scraped off. Acute atrophic is basically a denture stomatitis seen in patients wearing complete denture. Immune system of body also determines the occurrence of fungal infection. Immunocompromised state provides useful environment for the fungus to grow and it affects various sites in the body.³ The present study was conducted to assess the cases of fungal infection in study population.

MATERIALS & METHODS

The present study was conducted in the department of Skin. It comprised of 580 cases of fungal infection of both genders. All

patients were informed regarding the study and written consent was obtained. Ethical clearance was obtained prior to the study.

General information such as name, age, gender, location and types of fungal infection was noted. All cases were divided in different age groups. In all patients, clinical examination was done and to confirm the diagnosis scrapping were taken which were fixed with 10- 20% KOH culture in Sabouraud Dextrose Agar with chloramphenicol. Results thus obtained were subjected to statistical analysis using chi- square test. P value less than 0.05 was considered significant.

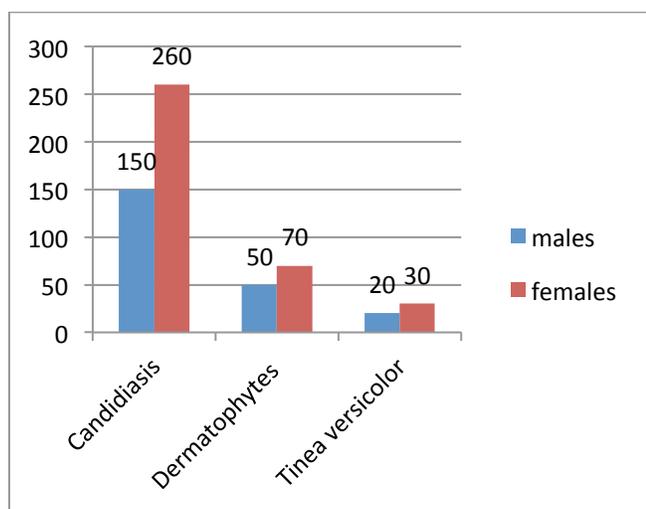
RESULTS

Table I Distribution of cases

Total- 580		
Males	Females	P value
220	360	0.5

Table I shows that out of 580 cases, males were 220 and females were 360. The difference was non- significant (P- 0.5).

Graph I Types of superficial fungal infection



Graph I shows that 150 males and 260 females had candidiasis, 50 males and 70 females had dermatophytic infection and 20 males and 30 females had tinea versicolor infection. The difference was significant (P- 0.05).

Table II Age wise distribution

Age group (years)	Males	Females	P value
1- 10	5	10	0.01
11- 20	35	40	
20-30	110	230	
30-40	50	60	
>40	20	20	

Total	220	360
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Table II shows that maximum cases were seen in age group 20- 30 years (males- 110, females- 230) followed by 30- 40 years (males- 50, females- 60), 11- 20 years (males- 35, females- 40). The difference was significant (P- 0.01).

DISCUSSION

Skin infections are common diseases in developed as well as in developing countries. Skin infections because of dermatophytes have become a significant health problem affecting children, adolescents and adults. The prevalence of skin infection is variable depending upon geographical distribution and gender distribution. There is numerous skin infections and hence careful analysis of dermatophyte infections requires both a fungal culture on Sabouraud's agar media and mycological examination using direct microscopy from skin scrapings, hair & nails.⁴ The present study was conducted to assess the cases of fungal infection in study population. In our study, out of 580 cases, males were 220 and females were 360. A study by Jitendra et al⁵, assessed 200 clinical samples which were fixed in 10- 20% KOH culture in Sabouraud Dextrose Agar found that maximum cases were of tinea cruris. The tinea infections are present universally but there occurrence is quite common in tropics and may reach epidemic proportions in geographical areas with higher humidity, overpopulation and poor hygienic living conditions hot and humid climate. In present study we observed that 150 males and 260 females had candidiasis, 50 males and 70 females had dermatophytic infection and 20 males and 30 females had tinea versicolor infection. This is in agreement with Enemour et al⁶. Adefemi et al⁷ in their study of prevalence of dermatophytosis among primary school children found that most commonly occurring skin lesion was candidiasis followed by viral infection. We found that maximum cases were seen in age group 20- 30 years (males- 110, females- 230) followed by 30- 40 years (males- 50, females- 60), 11- 20 years (males- 35, females- 40). Jitendra et al in their study found that maximum number of cases was in age group of 20- 40 years and there was male predominance whereas in our case females showed higher prevalence than males. It has been found that dermatophytes may spread from soil to person, animal to person or person to person. Socio- economic status, life style, sanitary hygiene are few contributing factors leading to fungal infection. Vikesh et al⁸ conducted an epidemiological study on dermatophytosis in human patients in Himachal Pradesh and found that 55% females and 45% males had this infection. Common occurrence was nails, skin and hairs. Bhavsar et al⁹ conducted a study of superficial mycoses with clinical mycological profile in tertiary care hospital found that tinea cruris was the most common clinical presentation and Trichopyton rubrum was the most common fungal pathogen isolated from clinical samples. Dodamanni et al¹⁰ in their study of identification and prevalence of dermatophytes found that among various skin lesion, fungal infection was the common one and dermatophytes were commonly seen with male predominance as compared to females. Mostly seen site was skin followed by nails and hairs. Grover et al¹¹ in their study of mycological profile of superficial mycosis found that 65% lesions were fungal infections while 25% were viral. Author suggested that these lesions were common among aged people with poor immune status. Aggarwal et al¹² conducted a clinical and mycological study of superficial

mycoses found 80% candidiasis among various superficial skin fungal infections and male female ratio of 1:2.

CONCLUSION

Author found that superficial fungal infections are commonly seen in females and age group 20- 30 years had maximum number of cases.

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