ORIGINAL ARTICLE

Frequency of Dermatophytosis in Karachi

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ABSTRACT

Aim: To determine the frequency of dermatophytosis in Karachi.
Place & duration of study: Study was conducted in the department of Microbiology, Basic Medical Sciences Institute, Jinnah Post Graduate Medical Center Karachi, from August-2010 to Dee 2010.
Methods: The Materials used for isolation of dermatophytes include skin, nails & hair. The specimens have to be collected in sterile glass containers, lesion area, sterilized with alcohol before sampling to remove contaminants.
Results: Out of 53 samples, 39 were culture positive, among them 30 were male & 9 female
Conclusion: Dermatophytosis is found to be more common in adult population.
Keywords: Dermatophytes, skin, hair, nails SDA, DTM

INTRODUCTION

According to macura dermatophytosis in human being as well as in veterinary is recognized as a major health problem (Metintas et al, 2004) including the environmental conditions play a major role in development of superficial mycosis. Like when humidity between 60-70% for most part of this year and in monsoon lie in density than located in north Bombay metropolis on west coast of Maharashtra State where altitude varies from 8-11 meters above mean sea level (Belurker et al, 2004). Infection by dermatophytes which include in species belonging to the genera Microsporum, Trichophyton and Epidermophyton are common all over the world (Kane, 1997). From an epidemiologic point of view they are divided into Anthropophilic, Zoophilic & Geophilic species whose normal habitat are human, animals and soil respectively (Weitzman & Summerbell 1995). The prevalence of different species of dermatophytic fungi are different all over the world reported by (Rahim, 1996, Flammia et al 1995 and Kannan P et al, 2006).

MATERIALS & METHODS

Study site: This study was performed in the Department of Microbiology, BMSI, JPMC. Karachi from August-2010 to Dee 2010 under the supervision of Saleem Ahmad Kharal Professor & HOD department of Microbiology, BMSI, JPMC, Karachi.

Sample size: Irrespective of age & sex, 53 samples were collected from the patients diagnosed having fungal infections from institute of Skin diseases Karachi & Skin OPD Department of Dermatology, Jinnah Postgraduate Medical Centre, Karachi. The material used for isolation of dermatophytes include skin, nails & hair. The specimens have to be collected in sterile glass containers, lesion area is sterilized with alcohol before sampling to remove contaminants such as bacteria (Elewsiki, 1998 Robert & Pihet 2005).

Specimens were collected in sterile filter paper in sufficient quantity and taken from edges of the infected area. The samples were obtained before any local or systemic antifungal treatment collected samples were inoculated on SDA and DTM Culture media growth appearing on vials was then isolated and identified.

RESULTS

Out of 53 samples 39(73.5%) were culture positive, 30(76.92%) samples were males and 9(23.07%) samples were of females. The five species involved were of genius trichophyton, of the 39, 27(69.23%) were T. tubrum, 4(10.25%) T. tonsurans, 3(7.69%) T. Mentagrophytes, 2(5.12%) T. Verrucosum, 3(7.69%) candida in Table.1. The incidence rate of dermatophytic infections was seen to be highest in the age group of 21-30, 31-40 & 41-50 years in table 2. Patients reporting at the Skin OPD were mostly from city & suburb areas of Karachi. Tinea unguium is common in middle age group, Tinea capitis and Tinea corporis are the most prevailing dermatophytic infections in Karachi affecting more frequently males and children respectively.

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Table 1: Gender wise prevalence of dermatophytic isolates.

	Male	Female	Total
Number	33	20	53
Positive	30	9	39
Trichophyton rebrum	22	14	36
Trichophyton tonsurans	3	1	4
Trichophyton mentagrophytes	2	2	4
Trichophyton verrucosum	1	1	2
Candida spp	2	1	3

Gender wise prevalence of dermatophytic isolates

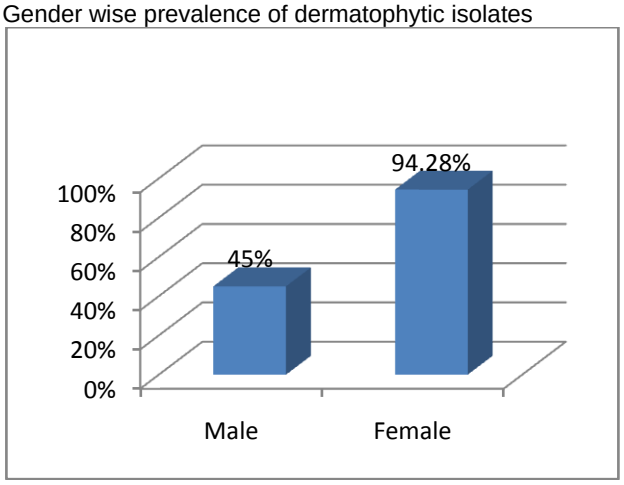

Table 2: Age wise prevalence of dermatophytic isolates

	Age in years		
	21-30	31-40	41-50
Trichophyton rebrum	10	9	8
Trichophyton tonsurans	1	2	1
Trichophyton mentagropytes	1	1	1
Trichophyton verrucosum	1	1	0
Candida spp	0	1	2

DISCUSSION

This study was planned to see frequency of dermatophytic pathogens in samples of skin, nails & hair the most commonly isolated pathogen was T. rubrum while T. tonsurans, T. verrucosum, T. mentagrophytes and candida spp were isolated in varying percentages. My study correlates with study of Dolenc Voljc, M (2005). Although the species distribution vary globally but T. rubrum is major pathogen, accounting for 63 to 89% of infections. My study is also agreed with Rippon (1998), according to him T. rubrum affects the horny layer of skin and hence it is more common and according to Patwardhan N & Dave (1999). The frequency of T. rubrum isolates in their researches were 28.12%, 59.76% & 88.15% respectively. Incidence rate in my study correlates with research of Patwardhan N & Dave R, (1999), according to them age group 21-30 years is predominantly affected and higher frequency of dermatophytosis among males according to Patwardhan (1999) and Prachola GR et al (2016) was like my study. A higher incidence of dermatophytosis in males than in females has been reported both in India and abroad according to study by Kanwar, Mamta, Chander (2001). Further Philpot CM (1997). reported that males are more vulnerable to exposure to army , school and sports both are equally relevant with my research. Epidermophyton floccosum and Microsporum species were not isolated, suggesting that they do not previal in high percentages in our environment according to research of Farheen Ansari and Shamim Ara Siddiqui (2006).

CONCLUSION

We can conclude that there is strong correlation of dermatophytosis with variation in age, sex and socio-economic status of population. Dermatophytosis is found to be more common in adult population.

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