

INCIDENCE OF DERMATOPHYTOSIS IN CHANDIGARH AND SURROUNDING AREAS

By

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Infection with dermatophytes is a common occurrence and forms a great bulk of cases attending any skin O. P. D. in the country. Ajello in 1960 pioneered the work of collecting information on dermatophytosis from various regions of the world and gave his interpretation regarding the prevalence, incidence and evolution of fungi in cases of dermatophytosis. Considerable work has been done on etiological aspects of dermatophytosis in India. Some of the important reports include work of Ghosh (1949), Gokhale (1959), Gupta & Shome (1959), Desai & Bhat (1961), Kurup & Anantha Naryan (1961) & Vasu (1966). From north Behl & Sharma (1958), Kalra et al, (1964), Kandhari & Sethi (1964) have reported the findings about dermatophytosis from Delhi area. The incidence of dermatophytosis from Chandigarh area has not been reported so far. As prevalence and incidence of various species of dermatophytosis vary considerably in different geographical regions of the world and from region to region in the country, the present report was prepared from the patients of dermatophytosis who attended the skin O. P. D. of P. G. I. hospital during a period of one year.

Material. The patients were examined as they came for advice in the skin O. P. D. during the period between 1st April, 1968 and March 31, 1969. The data regarding age, sex and type of lesions were recorded, most of the information included is from case records collected in retrospect. A classification according to the site affected was made, Scrapings from the edge of the lesion, nail bits and hair wherever indicated were taken and examined in 10% KOH for finding out the presence of hyphae, and spores. Some of the lesions though clinically looked tinea infections did not reveal fungal elements in KOH, but culture results were found to be positive in some of such cases. The fungus cultures were taken from only selected cases particularly those of tinea infection in children. The cultures were inoculated in slants of Sabouraud's Glucose Antibiotic agar and incubated at 22° & 37° C. The successful cultures were identified on the basis of shape and size of microconidia and gross cultural characteristics, in cases of yeast type of fungi further sugar reactions were undertaken to find the infection with *Candida albicans* or associated species.

Incidence. Approximately 14.5% of total skin cases were caused by fungi, this however includes a large number of cases of tinea versicolor without which the prevalence rate is around 9.07%. It compares well with the incidence reported by Desai & Bhat (1961) and Nagabhushanam et al (1969). Various clinical types

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can be studied from table I with age distribution. The most striking feature is the highest incidence of tinea versicolor infection, 282 cases out of a total of 751 (37.05%). The incidence reported in most of the other series is quite low, only 23 cases out of a total of 858 cases in the series of Kandhari & Sethi (1964); 192 cases out of 1080 cases of dermatophytosis in the series reported by Nagabhushanam et al (1969). Many series do not include tinea versicolor as a dermatophyte. Leaving aside tinea versicolor, the incidence of tinea corporis, cruris and tinea pedis is the highest, comparing well with the series of Kalra et al (1964), Kandhari & Sethi (1964), Desai & Bhat (1961), Vasu (1966). The incidence of all tinea infections is highest between the ages of 21-50 years (51.4%) though the incidence is also high between the ages of 11-20 years (36.8%). The findings are in conformity with the findings reported by workers from other parts of the country. Tinea infection is quite infrequent below the age of 10 years and above 50 years. There were only 2 cases of tinea capitis out of a total of 751.

TABLE I

Clinical Types	0-10 years	11-20 years	21-50 years	Above 50 years	Total
Tinea Corporis	6	48	112	24	190
Tinea Versicolor	16	133	123	10	282
Tinea Cruris	1	76	87	18	182
Tinea Pedis	1	18	23	2	34
Tinea Capitis	2	0	0	0	2
Tinea Mannum	0	1	15	0	16
Tinea Ungium	0	3	10	1	14
Tinea Barbae	0	0	0	0	0
Monilial	3	7	16	5	31
	29 3.8%	276 36.8%	386 51.4%	60 8%	751

The sex incidence is also quite revealing (Table II), the percentage being M:F 75.7:24.31. The findings are consistent with the earlier reports. No reasonable explanation for such gross difference in incidence can be forwarded. Tinea versi-

TABLE II

	Males	Females
Tinea Corporis	135	45
Tinea Versicolor	200	73
Tinea Cruris	180	16
Tinea Pedis	16	13
Tinea Capitis	3	2
Tinea Manum	10	4
Tinea Ungium	8	6
Tinea Barbae	0	0
Monilial Intertrigo	15	16
Monilial Paronychia	2	8
	569 75.7%	182 24.3%

color is again the most prevalent infection in females, next in occurrence are *Tinea Corporis*, *Monilia intertrigo* and *Tinea Pedis*. There were 16 cases of *Tinea cruris* out of a total of 182 (2.1%) as compared to 200 cases in males out of a total of 569 cases (26.4).

Cultural Characteristics. A total of 165 cultures were put up, 57 cultures grew the fungus. The incidence of various species is given in Table III. The *Trichophyton* species were most commonly grown, *T. rubrum* being 56.2%, *mentagrophytes* 3.5% and *trichophyton* species 5%, the incidence is quite comparable with other important series published from the country. KOH preparation was made in a number of cases but the percentage of positivity even in clinically characteristic cases was approximately 50%.

TABLE III

<i>Trichophyton rubrum</i>	32
<i>Trichophyton verrucosum</i>	1
<i>Trichophyton mentagrophytes</i>	2
<i>Trichophyton concentricum</i>	1
<i>Ep. floccosum</i>	1
<i>Candida albicans</i>	10
<i>Aspergillus</i>	5
Tr. species	5
	57
Total No. of cultures	165
Cultures positive	57

SUMMARY

A study of 751 cases of dermatophytosis diagnosed clinically and studied by culture is reported. The infection with *Tinea versicolor* is found to be the most prevalent in Chandigarh area in both sexes, next in occurrence is the body & groin dermatophytosis. The scalp infection is very rare. The most common fungus grown was *Trichophyton rubrum*, 32 out of 57 cultures, next common was *T. mentagrophytes*. The prevalence of these clinical types compared well with reports from Delhi, Bombay, Poona & Andhra Pradesh.

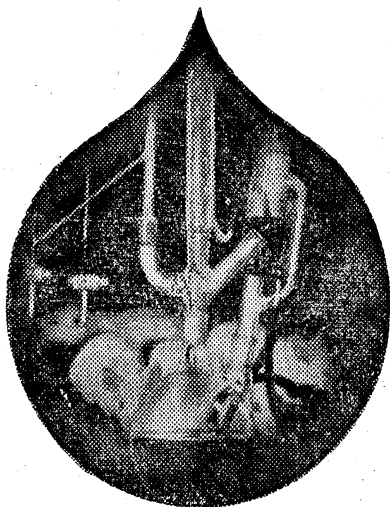
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