

DERMATOMYCOSES IN ROHTAK (An analysis of cases)

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Summary

In the present series, 100 cases of dermatophytoses were studied clinically and subjected to mycological examination. Total of 93 cases of dermatophytoses showed evidence of fungus either by KoH method or culture or both.

T. cruris (34%) was commonest and next in frequency was *T. corporis* (25%) *T. capitis* was 6%. Age and sex incidence were recorded.

From 63 cases the dermatophytes were isolated. Forty-five isolates were of *T. rubrum*, 6 of *T. violaceum*, 6 of *E. floccosum*, one of *T. tonsurans* and 5 were of *Candida albicans*. These studies are in conformity with most of the other workers.

Fungal infections are common conditions encountered in the practice of dermatology. These diseases are more frequently seen in tropical and sub-tropical countries, where heat and moisture play important role in promoting the growth of these organisms. In India mycotic diseases are very common and the main bulk is constituted by superficial mycoses. Since last few years much work has been done on dermatophytoses in different parts of the country but still the data is far from complete. The present work was undertaken to find out various species of dermatophytes prevalent in Rohtak area, but it was a sample study done during the months March, April and May when the incidence of dermatophytoses is not high. Our results, therefore do not show the true incidence of various species prevalent in Rohtak area. The average incidence of fungus diseases encountered during the years 1968-71 has been 9.73%

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Material and methods

For the present study 100 clinically diagnosed cases of superficial mycoses were selected from the patients attending the skin outpatient department of Medical College, Rohtak. Data regarding age and sex, duration of infection and family history were collected. All the patients were subjected to mycological study. The affected part was properly cleaned with 70% alcohol and scrapings were collected on sterile paper with a sterilised scalpel.

The collected material was subjected to the mycological examination both by direct smear with 20% KoH and by cultures on Sabouraud's media with chloramphenicol and actidione.

Results

Out of 100 cases, 34 had tinea cruris, 25 had tinea corporis and 15 had *T. cruris* et *T. corporis*. Six patients had tinea capitis infection, 11 had tinea pedis, 2 had *T. unguim*, 5 had *T. unguim* et *corporis*. One patient had *T. barbae* and another one had intertrigo of finger webs.

Age and Sex Incidence

TABLE 1
Showing age and sex incidence of 100 cases of tinea infection

Age group	0-15		16-39		31-45		46-60		61 and above	
	M	F	M	F	M	F	M	F	M	F
T. corporis	5	1	5	3	3	—	6	2	—	—
T. cruris	1	—	17	1	7	—	7	1	—	—
T. pedis	—	1	6	—	2	2	—	—	—	—
T. capitis	6	—	—	—	—	—	—	—	—	—
T. unguim	1	—	1	—	—	—	—	—	—	—
Total	13	2	29	4	12	2	13	3	—	—

It is evident from the above table that maximum number of cases were encountered in the age group of 16-30 years and males were more commonly affected than females in all age groups.

Mycological studies

A total of 120 sites were scraped from the 100 cases because in 15 patients both crural and body regions were involved and the scrapings were taken from both these sites. Similarly in 5 cases both body and nails were involved and scrapings were taken from both sites. Their analysis revealed the following results :

1. Out of 120 scrapings 93 were positive by KoH method.
2. Sixty-three cases were positive both by KoH and culture methods.
3. Thirty cases were KoH positive but culture negative.

TABLE 2
Showing results of KoH and culture examination

Total scrapings	KoH+	KoH-	KoH+ culture	KoH+ culture-
120	93	27	63	30

Culture study

In all, 63 cultures were positive for dermatophytes. *T. rubrum* was the commonest organism isolated. Next in frequency were *E. floccosum* and *T. tonsurans* was obtained and there were isolates of *Candida albicans*.

TABLE 3
Shows incidence of different varieties of dermatophytes in 100 cases of tinea infections

Species	No. of cases	Percentage
<i>T. rubrum</i>	45	71.42
<i>T. violaceum</i>	6	9.53
<i>T. tonsurans</i>	1	1.58
<i>E. floccosum</i>	6	9.53
<i>Candida albicans</i>	5	7.94
Total	63	100

TABLE 4
Shows correlation between clinical and mycological study

Species	Total	T. corporis	T. cruris	T. capitis	T. ung. etc. corp.	T. unguim	T. pedis	T. corp. etc. cruris
<i>T. rubrum</i>	45	12	16	—	2	1	1	13
<i>T. violaceum</i>	6	3	—	2	—	—	1	—
<i>E. floccosum</i>	6	—	5	—	—	—	1	—
<i>T. tonsurans</i>	1	1	—	—	—	—	—	—
<i>Candida albicans</i>	5	—	—	—	—	—	—	5

It is evident from the above table that *T. rubrum* was the commonest organism isolated from *T. corporis* and *T. cruris* and it was the only organism isolated from *T. unguim*. *T. violaceum* was isolated from *T. corporis* and *T. capitis* and *E. floccosum* from *T. cruris* and *T. pedis*. *Candida albicans* was isolated from 5 cases of intertrigo of feet and finger webs.

Discussion

In the present study 100 clinically diagnosed cases of tinea infection were included. Their analysis showed that incidence of tinea glabrosa is the highest (79 %) Gupta⁵, Desai³, Kandhari⁷, Kalra⁶, Verma¹¹ and almost all other workers have agreed that incidence of tinea glabrosa infection is the highest in our country. No special reason for this incidence has been given by any of the workers. Amin and Shah¹ have suggested that the patients suffering from tinea glabrosa suffer from severe itching so that they come to the clinic very early for advice.

Incidence of tinea capitis was low in our series (6%). Other workers have also reported a low incidence of tinea capitis. Amin¹ reported the incidence of tinea capitis to be 2.95%, Desai³ 5.5% and Verma¹¹ reported only 2 cases in his series of 100. It is a general agreement that *T. capitis* is rare in India. Desai³ and Kandhari⁷ suggested that this may be due to use of vegetable oils on scalp. Incidence of tinea pedis was also low (11%) in our series. Desai³ reported incidence of *T. pedis* as 11% and Kandhari reported the incidence as 13%. *T. unguim* was found in 7 cases in our series. Other workers have also reported the incidence of *T. unguim* to be very low.

As regards age incidence, maximum number of cases were encountered in the age group of 16-30 years. Desai Nagabhushnam⁹, Ghosh⁴, Panda¹⁰ and most of the other workers have all reported that incidence of fungus

diseases is highest in second and third decade. Tinea capitis is commonly found in low age group and though to be exclusively a prepubertal disease. In our series all the cases of *T. capitis* were below the age of 15 years. This low age incidence may be due to the fact excess of sebum, containing free fatty acids is produced after the age of puberty which hinders the growth of fungus. Amin¹ thought that Thymus gland and its remnants during childhood may increase the incidence of tinea capitis at that age.

Regarding the sex incidence, the present series showed that fungus infection is more common in males (87%). This is in conformity with all other workers.

Culture studies

In present series, out of 120 scrapings, 93 showed evidence of fungus either by KoH method or culture of both. Isolation rate in our series is 77%.

TABLE 5
Showing the isolation rates of different workers

1. Desai et al (1959)	70	Percent
2. Kalra et al (1964)	32	"
3. Mankodi et al (1966)	42	"
4. Amin et al (1971)	68	"
5. Present series (1971)	77	"

Analysis of 63 strains of dermatophytes showed *T. rubrum* to be the most predominant species with incidence of 71.42%. *T. violaceum* was 9.53%, *E. floccosum* 9.63 *T. tonsurans* 1.58% and *Candida albicans* 7.94%. The comparison of present series with those of different workers from all over India is shown in Table VI.

Reports from all over India put *T. rubrum* as the commonest organism. *T. mentagrophyte* is second in frequency in most of series but it was not isolated by Mankodi⁸ and Amin¹ and in the present series. Its incidence seems to

TABLE 6

Showing comparison of percentage incidence of various species isolated by different workers in India

Name of worker	T. rub.	T. voil.	T. ment.	T. tons.	T. Sch.	T. Verr.	T. Flo.	M. Aud.	M. Canis.	M. Gyp.
1. Ghosh (1948) Bengal	63.00	1.41	2.36	—	—	—	32.23	—	—	—
2. Gupta (1959) U. P.	56.73	—	31.73	—	—	9.6	1.92	—	—	—
3. Desai (1961) Bombay	84.45	8.81	2.32	1.80	—	—	2.32	—	—	0.23
4. Kalra (1964) Delhi	80.61	3.52	9.91	0.20	—	0.66	3.08	—	—	0.23
5. Kandhari (1964) Delhi	68.50	1.00	9.50	15.00	0.50	—	2.50	1.00	2.50	0.50
6. Kankodi (1967) Ahmedabad	84.88	4.34	—	4.34	—	—	4.34	—	—	—
7. Panda (1967) Orissa	78.43	—	10.78	0.88	—	—	1.96	—	—	—
8. Nagabhushnam (1969) Hyderabad	51.43	14.68	2.78	6.78	—	6.96	4.17	—	—	—
9. Verma (1970) Baroda	88.90	—	8.30	—	—	—	2.80	—	—	—
10. Amin Shah (1971) Ahmedabad	92.60	4.25	—	2.10	—	—	1.05	—	—	—
11. Present Series (Rohtak)	71.42	9.53	—	1.58	—	—	9.53	—	—	—

be decreasing. Incidence of *T. violaceum* varies in most of the series from 1.5% to 10.5% and that of *E. floccosum* from 2.8% to 32%.

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False

Hypertrichosis Laruginosa are of two types, the congenital and the acquired. The congenital variety is a rare benign condition. The only abnormality associated with this is a developmental abnormality in the molar teeth. In contrast, the acquired hypertrichosis laruginosa universalis has been associated with malignancies and referred to as 'malignant down'. This condition has antedated other signs of malignancy.

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