

## A Study on Dermatomycoses

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**Abstract:** Fungal infections of skin and its appendages are more prevalent in India due to hot, humid climate. Other factors which influence the prevalence and severity are malnutrition, poor hygiene, poverty and immune suppressive conditions like diabetes, HIV and cancer chemotherapy etc. Among 100 cases of dermatomycoses 70 Percent were Dermatophytosis, 26 percent cases were pityriasis versicolor and 4 percent of cases were candidiasis. Commonest age groups affected were 21 to 30 years. Males are commonly affected than females.

Tinea Corporis is the commonest type followed by pityriasis versicolor Tinea cruris and Onychomycosis

**Keywords:** - Cutaneous mycoses - Clinical patterns – mycology

### I. Introduction

Fungal infections restricted to the stratum corneum, keratin of nail and hair are superficial mycoses. These infections are caused by species of dermatophytes, malassezia and candida. They cause dermatophytosis, pityriasis versicolor and candidosis respectively. Fungal infections are more prevalent in India due to hot, humid climatic conditions. Mostly diagnosed clinically, identification of species is important since the source of infection can be traced and its transmission halted. This study is conducted to assess the changes in clinical patterns and changes in the etiological species.

### II. Material And Methods

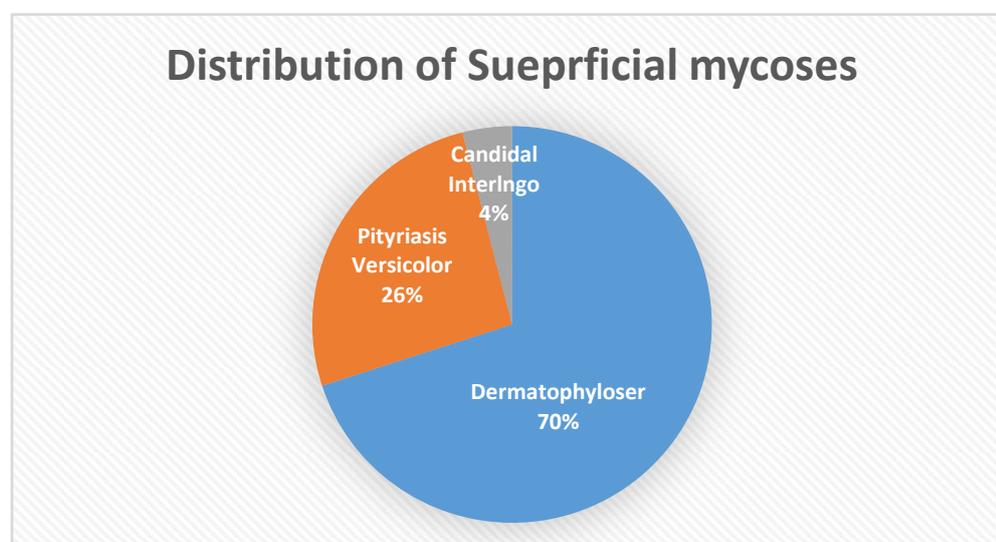
Present study was conducted in O.P.D. of DVL, S.V.R.R.G.G.Hospital during March 2009 to June 2009. Informed consent was obtained from the patient. Patients with all age groups and both genders were included in the study. Clinical diagnosis was made and appropriate specimens like skin, hair or nail clippings were collected and sent for KOH monitoring and culture in Sabourauds medium.

### III. Results And Discussion

Out of a total of 3,520 cases who have attended DVL OPD, 343 had superficial mycoses (9.8 percent)

In the present study of 100 cases 70 percent were dermatophytosis, 26 percent were pityriasis versicolor and 4 percent were candidal intertrigo.

Chart-I



Maximum numbers of patients were between 21 – 30 years followed by 31-40 years.

Dermatophytosis was the commonest cutaneous mycoses followed by pityriasis versicolor and candidal intertrigo.

**IV. Age Wise Distribution Of Cases**

Maximum number of patients was in the age group of 21-30 years in dermatophytosis group, 18/70 cases (25.7 percent ), 21-30 years in Pityriasis versicolor group 6/26 (23.06) and 31-40 years in candidal intertrigo group 2/4 (50 Percent )

**Table I: Age wise Distribution of Superficial Mycoses**

Age group	Tinea corporis	T.Cruris	Onychomycosis	Others	PV	Candidal intertrigo
1-10	3	-	0	0	2	1
11-20	6	1	0	4	5	-
21-30	9	6	3	3	6	-
31-40	7	4	4	1	5	2
41-50	6	3	1	2	4	1
>50	5	2	-	-	4	-
<b>Total</b>	<b>58</b>	<b>49</b>	<b>11</b>	<b>20</b>	<b>52</b>	<b>8</b>

Common in males than females. 56 males, 44 females were infected.

**V. Clinical Patterns**

Among dermatophytosis Tinea corporis is the commonest clinical type (36 case/70 cases) followed by pityriasis versicolor (26 cases), Tinea cruris (16 cases), onychomycosis (8 cases) and candidal intertrigo (4 cases).

**Photograph-I: Tinea Corporis**



**Photograph-II: Tinea Cruis Extending on to Abdomen**



**Photograph -III: Pityriasis Versicolor**



**Photograph-IV: Pityriasis Versicolor**



**VI. Mycological Study**

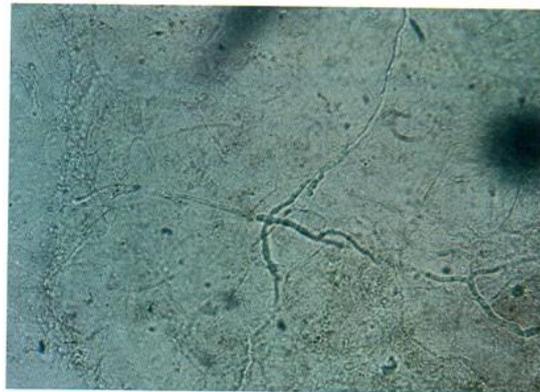
Out of 70 cases of dermatophytosis 55 cases were KOH positive (78.5 percent) and 22 cases were culture positives (31.5 percent). Out of 26 cases of pityriasis versicolor 24 cases were KOH positive (98.51 percent) and 18 cases was culture positive (69.2 percent). Out of 11 cases of candidosis 2 cases were KOH positive (50percent) and 3 cases were culture positives(75 percent).

Out of 11 cases of candidosis 2 cases were KOH positive (50 percent) and 3 cases were culture positive (75 percent).

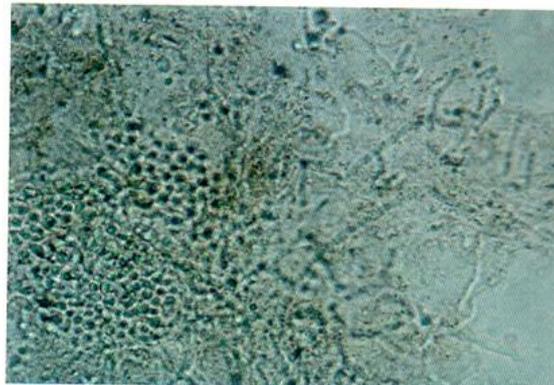
**Photograph V: Growth of Trichophyton Mentagrophytes on Sabouraud's Dextrose Agar**



**Photograph VI: KOH Preparation: Septate Branching Hyphae Typical of Dermatophytes**



**Photograph VII: KOH Preparation: Thick walled Yeasts and Short Hyphae Typical of Malassezia Furfur**



**Table-II: Microscopy and Culture in Superficial Dermatomycoses**

Culture KOH	Dermatophytosis		P.versicolor		Candidal intertrigo	
	Positive	Negative	Positive	Negative	Positive	Negative
Positive	22	55	18	24	3	2
Negative	48	15	8	2	1	2

### VII. Isolation Of Various Species Of Dormatomycoses

Among dermatomycoses Trichophyton rubrum (8 cases, 64 Percent) was the commonest species isolated followed by Trichophyton mentagrophytes (5 cases, 22.72 Percent), Trichophyton verrucosum and Trichophyton tonsurans (one case each)

Out of 26 cases of p.versicolor 18 cases (69.2 Percent) were culture positive; out of 4 cases of candidial intertrigo 3 cases (75 Percent) were positive for candida.

**Table-III: Species of Dermatomycoses**

	T.corporis	T.Cruris	Onychomycoses	Tinea Barbae	P.Versicolor	Candidal Intertrigo
T.rubrun	8	5	1	1		
T.Mentagrophytes	1	2	1	1		
T.Verrucosun	1					
T.Tansurans	1					
Mallasszia					18	
<b>Candida</b>						<b>8</b>

### VIII. Discussion

Superficial mycoses are one of the common cutaneous problems in our patient attending O.P.D. Majority of cases are seen between ages 21-30 years. This is comparable to the reports of other studies (Belurkar DD et al, Sumana V et al, Parul Patel et al). Dermatophytes is the common clinical type (70 Percent) followed by P.versicolor (26 Percent), candidosis (4 Percent) Results are comparable to other studies (P.Kannan et al., Kamalam A et al.) Among dermatophytoses, Tinea corporis is the most common clinical type followed by T.cruris. This is in concurrence with Baskaran CS et al., who had done the study in Tirupati. This is in variance with other studies done by Leela Naidu et al., SA Damle et al.

We could isolate fungi from 43 cases. Isolation rate was more in Candidal Intertrigo (75 percent) followed by P.versicolor (69.2 percent) and Dermatophytosis (31.5 percent). The different species isolated in the present study are T.rubrum, T.mentagrophytes, T. verrucosum, T. tonsurans, malassezia and candida. This is in accordance to the study done by Parul Patel et al., Singh S et al. This is at variance from the study of Bhaskaran CS et al., in 1977 in Tirupati which showed E.floccosum as the commonest isolate.

### IX. Conclusions

1. The incidence of dermatomycosis in our OPD was 9.8%.
2. Commonest age group affected was 21-30 years
3. Common in males than in females
4. 70 percent cases were dermatophytoses, 26 percent cases were pityriasis versicolor and 4 percent cases were candidal Intertrigo.
5. Tinea Corporis was the commonest type followed by Pityriasis Versicolor, T.Cruris, Onychomycosis and Candidal intertrigo.
6. KOH mount was positive in 81 cases and culture was positive in 43 cases.
7. Malassezia was the commonest isolate followed by Trichophyton rubrum.

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