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A CLINICOEPIDEMIOLOGICAL STUDY ON PITYRIASIS VERSICOLOR IN A TERTIARY CARE CENTRE IN CHENNAI

Dermatology

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ABSTRACT

The aim of the study was to analyse the clinicoepidemiological features in patients with pityriasis vericolor. A retrospective analysis of clinicoepidemiological features of patients with pityriasis versicolor who had attended the Dermatology OPD, in a tertiary care centre between August 2018 and July 2021 was done. All the required data had been collected from the OPD records and the details were tabulated and analysed. A total of 424 patients had pityriasis vericolor during the study period, out of which 192 were males and 232 were females. Majority of patients presented in the months of summer (between February and May) throughout the period of study. Most common age group affected (37.2%) was 21 to 30 years, with hypopigmented skin lesions (68.2%) being the most common presentation. When analysed and compared with the previous studies, the clinicoepidemiological profile observed in our study is generally in accordance with studies from similar geographical regions.

KEYWORDS

Pityriasis versicolor, Tinea versicolor, epidemiology, clinical

INTRODUCTION:

Pityriasis versicolor, also referred to as Tinea versicolor is a superficial fungal infection. It is caused by a dimorphic fungus called Malassezia, which is a part of the skin microbiota.[1] They depend on lipids for their growth and survival. Hence, they are most commonly seen in people who increasingly perspire.[2] They present as finely scaling, dyspigmented macules or patches. The distribution of the skin lesions is predominantly noted in seborrheic areas (trunk, neck, arms and occasionally the facial region). It is usually asymptomatic or mildly pruritic.[1,2] Pityriasis versicolor is diagnosed easily by its clinical presentation. Wood's lamp may be used to exhibit the characteristic copper-orange fluorescence. Malassezia species can be demonstrated on potassium hydroxide microscopic examination showing a grape-like cluster of yeast cells and short hyphae, commonly referred to as spaghetti and meatball appearance.[2] Mild pityriasis versicolor can be treated with topical anti-fungal therapy, whereas systemic antifungal therapy can be opted for extensive lesions.[3] The high prevalence of pityriasis versicolor attributes to multiple risk factors associated with it. It is essential to understand its etiological factors better as it could aid with the preferred treatment modalities and its prevention. This study has been conducted among patients attending the dermatology OPD of a tertiary care centre situated in an urban area, with the aim of understanding the clinicoepidemiology of pityriasis versicolor.

MATERIALS AND METHODS:

A retrospective study of patients diagnosed with pityriasis versicolor, who had attended the Dermatology OPD of a tertiary care centre, was conducted through assessment of OPD records between August 2018 to July 2021. The collected information was tabulated and analysed.

RESULTS:

Table 1: Number Of Patients Diagnosed With Pityriasis Versicolor During The Study Period

TOTAL NUMBER OF PATIENTS	MALE	FEMALE
424	192 (45.3%)	232 (54.7%)

A total of 424 patients diagnosed with PV were included in the study in a period of 3 years. The ratio of male (n=192) to female (n=232) is 1:1.2.

The majority of male patients observed for age of onset were in the age group 21-30 (17.2%) while it was 11-20 (20.5%) in case of females. However, the predominant age group was 21-30 (37.2%) among the study population.

Table 2: Age Distribution Among The Total Study Population

AGE	MALE	FEMALE	TOTAL
0-10	21 (4.9%)	17 (4%)	38 (8.9%)
11-20	55 (13%)	87 (20.5%)	142 (33.5%)
21-30	73 (17.2%)	85 (20%)	158 (37.2%)
31-40	23 (5.4%)	30 (7.1%)	53 (12.5%)
41-50	8 (1.9%)	10 (2.4%)	18 (4.3%)
51-60	5 (1.2%)	3 (0.7%)	8 (1.9%)
61-70	5 (1.2%)	0	5 (1.2%)
>71	2 (0.5%)	0	2 (0.5%)
TOTAL	192 (45.3%)	232 (54.7%)	424

Table 3: Age Distribution Among Male Study Population

AGE	MALE
0-10	21 (11%)
11-20	55 (28.6%)
21-30	73 (38%)
31-40	23 (12%)
41-50	8 (4.2%)
51-60	5 (2.6%)
61-70	5 (2.6%)
>71	2 (1%)

Table 4: Age Distribution Among Female Study Population

AGE	FEMALE
0-10	17 (7.3%)
11-20	87 (37.5%)
21-30	85 (36.6%)
31-40	30 (13%)
41-50	10 (4.3%)
51-60	3 (1.3%)
61-70	0
>71	0

Table 5: Monthly Distribution From 2018-2021 In The Study Population

MONTH	2018	2019	2020	2021	TOTAL
JANUARY	-	8 (1.9%)	7 (1.6%)	18 (4.2%)	33 (7.7%)
FEBRUARY	-	21 (5%)	7 (1.6%)	26 (6.1%)	54 (12.7%)
MARCH	-	18 (4.2%)	9 (2.1%)	21 (5%)	48 (11.3%)
APRIL	-	19 (4.5%)	0	32 (7.5%)	51 (12%)

MAY	-	15 (3.5%)	7 (1.6 %)	27 (6.4%)	49 (11.5%)
JUNE	-	11 (2.6%)	4 (1.4%)	5 (1.2%)	20 (5.2%)
JULY	-	7 (1.6%)	1 (0.2%)	14 (3.3%)	22 (5.1%)
AUGUST	9 (2.1%)	7 (1.6%)	9 (2.1%)	-	25 (5.8%)
SEPTEMBER	12 (2.8%)	6 (1.4%)	17 (4.1%)	-	35 (8.3%)
OCTOBER	12 (2.8%)	6 (1.4%)	17 (4.1%)	-	35 (8.3%)
NOVEMBER	7 (1.6%)	16 (3.8%)	7 (1.6%)	-	30 (7%)
DECEMBER	1 (0.2%)	7 (1.6%)	14 (3.3%)	-	22 (5.1%)
TOTAL	41 (9.5%)	141 (33.1%)	99 (23.7%)	143 (33.7%)	424

Majority of the patients had presented during the month of February (12.7%) followed by April (12%).

Table 6: Monthly Distribution From 2018-2021 Within The Male Study Population

MONTH	2018	2019	2020	2021
JANUARY	0	4 (0.9%)	1 (0.2%)	10 (2.4%)
FEBRUARY	0	9 (2.1%)	3 (0.7%)	10 (2.4%)
MARCH	0	7 (1.6%)	5 (1.2%)	12 (2.8%)
APRIL	0	7 (1.6%)	0	12 (2.8%)
MAY	0	7 (1.6%)	4 (0.9%)	9 (2.1%)
JUNE	0	3 (0.7%)	1 (0.2%)	2 (0.5%)
JULY	0	2 (0.5%)	0	7 (1.6%)
AUGUST	8 (1.9%)	2 (0.5%)	4 (0.9%)	-
SEPTEMBER	8 (1.9%)	4 (0.9%)	9 (2.2%)	-
OCTOBER	8 (1.9%)	4 (0.9%)	6 (1.5%)	-
NOVEMBER	4 (1%)	5 (1.2%)	3 (0.8%)	-
DECEMBER	1 (0.2%)	3 (0.7%)	8 (1.9%)	-
TOTAL	29 (6.8%)	57 (13.3%)	44 (10.5%)	62 (14.6%)

Table 7: Monthly Distribution From 2018-2021 Within The Female Study Population

MONTH	2018	2019	2020	2021
JANUARY	0	4 (0.9%)	6 (1.5%)	8 (1.9%)
FEBRUARY	0	12 (2.8%)	4 (0.9%)	16 (3.8%)
MARCH	0	11 (2.6%)	4 (0.9%)	9 (2.1%)
APRIL	0	12 (2.8%)	0	20 (4.7%)
MAY	0	8 (1.9%)	3 (0.7%)	18 (4.2%)
JUNE	0	8 (1.9%)	3 (0.7%)	3 (0.7%)
JULY	0	5 (1.2%)	1 (0.2%)	7 (1.6%)
AUGUST	1 (0.2%)	5 (1.2%)	5 (1.2%)	-
SEPTEMBER	4 (0.9%)	2 (0.5%)	8 (1.9%)	-
OCTOBER	4 (0.9%)	2 (0.5%)	11 (2.6%)	-
NOVEMBER	3 (0.7%)	11 (2.6%)	4 (0.9%)	-
DECEMBER	0	4 (0.9%)	6 (1.5%)	-
TOTAL	12 (2.8%)	84 (19.7%)	55 (13.2%)	81 (19.1%)

The most common presentation observed in our study was hypopigmented lesions (68.2%), followed by hyperpigmentation lesions (26.8%).

Table 8: Type Of Lesion In The Study Population

TYPE	NUMBER OF PATIENTS
Hypopigmented	289 (68.2%)
Hyperpigmented	111 (26.8%)
Mixed	24 (5%)

DISCUSSION:

Pityriasis versicolor is a common pigmentation disorder of tropical regions. Our analysis showed that most of our results concurred with previous studies but a few observations differed.

Most studies including Gatha S Rao et al and Banur Raju Archana et al showed a male preponderance of the disease in the study population.[4,5] However, our study showed a slightly raised female proportion, with a male:female ratio of 1:1.2.

The commonest age group of presentation was observed to be 21-30 years (37.2%). This was correspondingly noted among the male study population (38%). This was in accordance with Gatha S Rao et al and Banur Raju Archana et al. Within the female study population, 11-20 years (37.5%), was found to be the most common age group of presentation, followed by 21-30 years. This was similar with Sudip Kumar Ghosh et al's study where the overall age predominance was between 11-20 years.[6]

The susceptibility of the disease during time periods of increased perspiration has been well exhibited. This corresponds with the highest number of patients seen in our OPD during the months of summer, between February and May. Despite the month of April 2020 reporting nil patients of pityriasis versicolor owing to the COVID pandemic lockdown, it still ranks overall as the second highest month (12%) in the incidence of the disease in our study of three years.

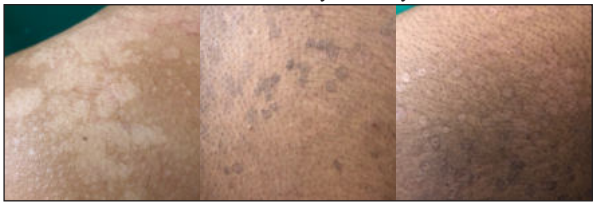

Figure 1: PV - Hypopigmented lesions

Figure 2: PV - Hyperpigmented Lesions

Figure 3: PV - Mixed lesions

Pityriasis versicolor can present as hypopigmented, hyperpigmented or mixed skin lesions. Our study showed the greatest number of patients presenting with hypopigmented lesions (68.2%). This is also noted in the Gatha S Rao et al and Sudip Kumar Ghosh et al's studies.

CONCLUSION:

Pityriasis versicolor has been notoriously famous for its propensity of recurrence. The importance of personal hygiene must be counselled to the patients to avoid recurrence. Studies from various geographical regions show results according to the local conditions, reiterating the need for more research on the basis of endogenous conditions. Identification of the common predisposing factors in the local regions can help reduce the incidence of disease and its recurrence tremendously.

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