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Research Article

Clinico-epidemiological study of pityriasis versicolor in a rural tertiary care hospital

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ABSTRACT

Background: The study was conducted to know the incidence of pityriasis versicolor in relation to age, sex, seasons and occupation in a rural set up.
Methods: A total of 105 patients of pityriasis versicolor were clinically evaluated and confirmed mycologically at central lab in a tertiary care hospital in South India. The obtained data was recorded and analysed accordingly.
Results: Male preponderance was observed in the study. Disease was most pronounced in younger age group (21-30 years) especially students. 61.9% of patients sought medical advice on cosmetic grounds while 38% had pruritis. Chest was the commonest site of affection followed by neck and back.
Conclusion: Early identification of the yeast by simple laboratory techniques would help prevent recurrences, systemic complications and cosmetological problems which are high especially among the students and younger age groups.

Keywords: Occupation, Pityriasis versicolor, KOH

INTRODUCTION

Pityriasis versicolor is a chronic superficial scaling dermatomycosis characterized by hyperpigmented and hypopigmented macules on the trunk and proximal extremities of young adults.[1,3] It is distributed worldwide, found most frequently in tropical and temperate regions with major frequency of relapses.[4] It is caused by Malassezia yeast, a dimorphic fungus occurring as normal skin flora on human body.[2] Its distribution as normal flora is related to sebaceous gland density; hence scalp, face, chest, and back bear the highest number of fungi. Clinical disease is produced under conditions that permit the conversion of saprophytic yeast phase of the organism to the mycelia phase such as high sebum levels at puberty, excessive sweating, warmer climate, application of oil, malnutrition, administration of systemic steroids, antibiotics, immunosuppressives, Cushing's disease , pregnancy, intake of OCPs etc. are some factors that facilitate massive growth of the fungus.[1] The present study aims to find out the clinical pattern, epidemiological characteristics of pityriasis versicolor and any associations with other diseases in our region.

METHODS

Type and place of study: An outcome study was carried out at Adichunchanagiri institute of medical sciences, B. G. Nagara, a tertiary care set-up.

Duration of the study: The study was conducted from September 2011 - December 2012

Inclusion criteria: A total of 105 patients of pityriasis versicolor attending the dermatology OPD were included for the study. A detailed history regarding age, sex, occupation, symptoms, duration, history of recurrence, animal contact, associated dandruff, family history, use of shampoo, oiling of body and hair etc. were recorded.

Exclusion criteria: Patients presenting with hypopigmentary disorders of skin other than pityriasis versicolor were excluded from the study.

Clinical examination was done to determine the characteristics and distribution of the lesions, color of lesions, scaling and associated seborrhoeic dermatitis of the scalp.

Mycological examination was done by examining KOH treated skin scrapings under microscope to look for the characteristic spaghetti meat ball appearance/banana and grapes appearance. The recorded data was analysed accordingly.

RESULTS

Of the 105 cases examined, 76.19% were males, 23.8% were females. Male to female ratio was 3.2:1. Most of patients were young adults. 40% belonged to age group 21-30 years.

34.2 % of patients were agriculturists by occupation. 61.9% of patients sought medical advice on cosmetic grounds while 38% had pruritis.

The incidence was high during August-September in 34.2%, followed by October-November in 22.8%. Chest was most common site to be affected in 38%. Poor personal hygiene was observed in students residing at hostels and in agriculturists.

Frequent oiling of hair body was observed in 90%. Family history was positive in 14.2% and 31.4% had associated seborrhoeic dermatitis. Morphologically hypopigmented variety was seen in 80%, hyperpigmented in 15.2%, mixed in 4.7%. 80% showed positive results under KOH examination while 18% were culture positive.

Table 1: Distribution of study group based on occupation.

Occupation	No. (%)
Students	38 (36.1%)
Housewives	12 (11.4%)
Agriculturists/farmers	36 (34.2%)
Daily wagers	19 (18%)

Table 2: Sites of distribution of lesions.

Site	Number of patients (%)
Neck	18 (17.1%)
Chest	40 (38%)
Back	15 (14.2%)
Face	15 (14.2%)
Abdomen	06 (5.7%)
Limbs	05 (4.7%)
Axilla	06 (5.7%)

Table 3: Distribution of patients according to seasonal variations.

Months	Number of patients (%)
April-May	6 (5.7%)
June-July	21 (20%)
Aug-Sep	36 (34.2%)
Oct-Nov	24 (22.8%)
Dec-Jan	12 (11.4%)
Feb-Mar	6 (5.7%)

DISCUSSION

The present study was done in a rural tertiary health care hospital with patient input mainly from the surrounding villages. The most common affected age group was 21-30years followed by 11-20 years. Similar findings were given by Kaur et al.[3] (Age group 20-30 years), Shah et al.[7] (Age group 21-30 years), Krishnan et al.[6] (15-29 years), suggesting that the peak of infection coincides with the sebum production and hormonal influence.

Our study revealed male preponderance over females, which is in agreement with studies by Ghosh et al.,[2] Krishnan et al.,[6] Rao et al.[9] This may be due to major involvement of males in outdoor activities with maximum exposure to high temperature and humidity. While Kaur et al.[3] showed both sexes are equally prone to develop pityriasis versicolor.

The type of lesions seen in our study were more of hypopigmented variety followed by hyperpigmented and mixed types in 80%, 15.2% and 4.7% respectively, which correlated with the findings made by Shah et al.[7] (hypo pigmented (84.17%), hyperpigmented (8.63%), mixed (7.19%), Krishnan et al.[6] (hypo pigmented (84%), hyperpigmented (9%), mixed (6%)), Kabbin et al.[10] (hypo pigmented (67%), hyper pigmented (31%), mixed (2%)), while Rao et al.[9] observed mixed variety in 16.60%., hyperpigmented in 8.30%. This variation in the morphological appearance of lesions may be due to differences in climatic conditions and different study population.

Chest was the commonest site to be affected in our study followed by neck, face and back (Table 2). Similar

findings were given by Krishnan et al.,[6] Rao et al.[9] and Kabbin et al.[10] with lesions commonly in upper trunk, neck and back. The distribution of lesions coincides with the density of sebaceous glands distribution with highest occurrence on chest and back. Family history was seen in 19.04%. More or less similar results were given by Ghosh et al.[2] (25%), while Rao et al.[9] have reported higher percentage in 38.30% of cases. Associated seborrhoeic dermatitis in the study was seen in 31.4% of patients, while Ghosh et al.[2] have reported in 10% of cases. The causative agent Pityrosporum ovale found in seborrhoeic dermatitis shows antigenic similarities with pityrosporum orbiculare therefore one can be transformed into an another form.

In this study 55% of patients were from lower socio economic status comprising 36.1% students, 34.2% agriculturists, 18.01% daily wage labourers, 11.4% housewives (Table 1). Studies are sparse in this regard; also no probable association of pityriasis versicolor with socio-economic status and personal hygiene was noted in our study.

61.9% of patients sought medical advice on cosmetic grounds mainly comprising of students and housewives, suggesting extra attention of women and students towards beauty and cosmetic appearance.

Seasonal trend was observed in our study with 34.2% of cases in August-September month (Table 3). Similar findings were given by Rao et al.[9] and Ghosh et al.[2] with increased number of cases in summer months.

Recurrence in the study was noted in 38.09% which was in concordance with Ghosh et al.[2] in 48.18%, but Rao et al.[9] observed only in 1.60%, which may be attributed to the idiosyncratic nature of the condition, the local factors such as humidity, high temperature that remain unchanged and which help in contributing to varying recurrence rates of yeast even after treatment. No associated systemic diseases were recorded in our study, whereas Ghosh et al.[2] have reported co-existing systemic diseases such as diabetes mellitus, lymphoproliferative malignancies, use of immunosuppressives and systemic steroids in 2.73%, 1%, 2.73% respectively.

KOH was positive in 80% of cases in our study as like other studies by Kindo et al.,[8] Chaudary et al.,[11] while Rao et al.[9] have reported relatively lower rates (46.60%).

CONCLUSIONS

We conclude that the clinicomycological and epidemiological parameters found in our study does not differ significantly from those observed by other investigators. Malassezia species, a normal skin flora of low virulence is responsible for causing recurrent skin infections and serious systemic infections. Hence early identification of the yeast by simple laboratory techniques would help prevent recurrences, systemic complications and cosmetological problems which are high especially among students and younger age groups.

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