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"A CLINICOEPIDEMIOLOGICAL STUDY OF FACIAL DERMATOSES IN ADOLESCENT GIRLS ATTENDING A TERTIARY CARE CENTRE "

Dermatology

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ABSTRACT

Background: The obsession of getting a flawless skin is more for adolescents girls than in any other age group. But these problems are seldom given enough importance. Very common problem like acne vulgaris can cause serious psychological impact in them.
Methods: One hundred and nine adolescent female (10-19 years) patients with facial dermatoses presenting to skin department, of a tertiary care centre in Kolar,were selected for the study. Study design was descriptional and cross sectional, conducted from February 2020 to December 2020.
Results: Eighty seven percentage of the study population was students and the rest were school dropouts. Acne vulgaris was the diagnosis in 83 (76%) of cases. Second most common condition was seborrheic dermatitis accounting for 7 (6%) of cases.
Conclusions: Facial dermatoses are common among the adolescents girls. These dermatoses are of a major cosmetic concern in this age group. Early diagnosis and proper management with education of patients is important to prevent late disfiguring complications and psychological sequelae.

KEYWORDS

Adolescent girls, Facial dermatoses, Acne vulgaris

INTRODUCTION

Female students at intermediate, degree and masters level are usually in their teens. Adolescents are individuals in the age group 10-19 years[1]. They constitute more than 1.2 billion worldwide, and about 21% of Indian population.[2] Adolescence is a bad time to have skin disease especially on the face.[3] This period of life is associated with gross somatic and psychological changes in body. The gonadotrophic releasing hormone (GRH) from hypothalamus stimulates pituitary gland to secrete follicle-stimulating hormone (FSH) and leutinizing hormone (LH).

Similarly, glucocorticoids, mineralocorticoids and androgens are secreted by the adrenal cortex after being stimulated by adrenocorticotrophic hormone (ACTH) from the pituitary.[4,5] The face being the visible part of the body, imperfections or flawed appearance definitely has the potential to become a source of misery to some.[6] This emphasizes the fact that even a very common disorder, acne vulgaris, can have far-reaching detrimental effects on self-image and self-esteem of the individual.[7]The psychological impact these skin disorder can have on an adolescent girls is highly variable and unpredictable. This makes the study of various facial dermatoses prevalent in the age group of 10-19 years, important socially as well as clinically.

METHODS:

A total of one hundred and nine adolescent girls (10-19 years) with facial dermatoses presenting to skin department, at R L Jalappa Hospital & Research Centre Kolar were screened after obtaining the informed written consent, a detailed clinical history including onset and evolution of lesions, socio economic factors and environmental background of the patients were noted for the study. Study design was observational, and was conducted over 9 months duration. Adolescent girls with symptoms of facial dermatoses were included in the study. Patients and/or their guardians not giving consent, patients with drug reaction and seriously ill patients were excluded.

The data thus collected was entered in to a specially designed case record form and photographs were taken when needed. The data was entered in Microsoft excel and was analysed using SPSS 20.0 with the following statistical tests: Proportion: to find percentage, Mean: to find average, Standard deviation: to find dispersion, Chi square test: to compare proportion, Independent "t" test: to compare mean values. All the participants provided written and audio-visual informed consent to participate in the study.

RESULTS :

One hundred and nine patients were enrolled for the study during the study period. Eighty-seven percentage of the study population were students and the rest were school drop outs. Sixty six patients out of 109 (60%) were residing in semi urban or rural area and the rest in urban areas . In 100 (92%) cases, the lesions were asymptomatic and only 9 (8%) patients were having symptoms in the form of itching, burning or pain. Majority of patients approached the hospital with complaints of more than 2 years duration. Acne vulgaris was the most common diagnosis in 83(76%) patients, comedones (68%) being the predominant lesion followed by papules(16.5%). 50% acne cases were in the age group of 18-19 years and 30.3% were in 16-17 years. Most of the patients had milder forms of acne. Second most common condition was seborrheic dermatitis accounting for 7 (6%) cases. Apart from these, patients had polymorphic light eruption, post inflammatory hyperpigmentation, tinea faciei, vitiligo, verruca , contact dermatitis, pityriasis versicolor, freckles, etc.

Table 1: Age Distribution In The Study Group

CHARACTERISTICS	NUMBER OF PATIENTS	PERCENTAGE(%)
AGE(YEARS)		
10-11	3	3
12-13	7	6
14-15	18	16.5
16-17	30	27.5
18-19	51	47.0

Table 2:Duration (yrs) Of Presenting Symptoms

DURATION OF DISEASE(YEARS)	NUMBER OF PATIENTS	PERCENTAGE(%)
<2	17	15
2-5	36	33.5
>5	56	51.5

Table 3: Various Dermatosis In The Adolescent Girls (n=109)

DIAGNOSIS	NUMBER OF PATIENTS	PERCENTAGE(%)
ACNE VULGARIS	83	76
SEBORRHEIC DERMATITIS	8	7
PMLE	3	3
CONTACT DERMATITIS	2	1
TINEA FACIEI	2	2
PIH	2	2
P.VERSICOLOR	1	1
VITILIGO	1	1
MOLLUSCUM CONTAGIOSUM	1	1
MILIA	1	1
FRECKLES	3	3
LICHEN PLANUS PIGMENTOSUS	1	1
VERRUCA	1	1

DISCUSSION:

Face remains the main area of concern in health as well as disease. The appearance of face provides identity to the person. The skin lesions affecting face are generally termed as " facial dermatoses". Lesions on the facial skin evoke anxiety and concern to the patient forcing him to seek early medical attention. This group comprises of conditions of the skin like "acne vulgaris (AV), papulopustular rosacea (PPR), erythematotelangiectatic rosacea (ETR), perioral dermatitis, seborrheic dermatitis (SD), and atopic dermatitis (AD)" [8]The physiological changes associated with puberty bring about maturation of hair follicles, sebaceous glands and apocrine sweat glands. The pressure of coping with a maturing skin is sudden for a girl who is persuaded by advertisers.[3] This study conducted over a period of nine months included 109 patients. Most patients were in 18-19 years age group. Lesions were asymptomatic in 100(92%) cases and only 9 (8%) patients complained of itching or pain. A study by Kilkenny M et al have noticed that adolescents of age 18 years and more seem to regard their skin problems as more serious than the dermatologists.[9] They have also shown that self-reported skin complaints are more prevalent than objective signs in this age group as in our study. Sixty six patients out of 109 (60%) were residing in semi urban or rural area and the rest in urban areas . This finding of almost equal number of adolescents from rural areas in our study shows the increased awareness among adolescents in villages too, regarding facial lesions and their associated cosmetic concerns. This proves that appearance of face and its skin is extremely important in any society and culture. The predominant lesion over the face in 74 (68%) patients was comedones. 18 (16.5%) patients had papules as predominant lesions. The study by Puzenat E et al, on acne,seborrheic dermatitis found that grade 2 acne with comedones and few papules were the predominant lesions similar to our study.[10] Acne vulgaris was the diagnosis in 76% of cases that is 83 out of 109 patients. Majority of adolescents with acne 80.3%, belong to the age group of 16-19 years. This is in concordance to the study done by Hmar et al, where in more number of mid and late adolescents suffered from acne.[11] The reason for more number of acne patients presenting late in adolescence may be due to a tendency to delay professional advice as a result of ready availability of many over the counter medications and commercial products. Closed comedones were more common in our study. These findings were in accordance with the study by Adityan et al, in which grade 1 and grade 2 acne together constituted 87.7% of the total acne patients and the most common type of lesion was closed comedones present in all patients.[13] Acne vulgaris is a chronic condition that is virtually universal in adolescence. An individual is more likely to develop acne than any other disease in this age group. Androgens have long been implicated in acne pathogenesis.[10]They are known to regulate genes responsible for sebaceous gland growth and sebum production.[13] Estrogen may exert its effects through several mechanisms: direct opposition effect on androgens, inhibition of androgen secretion or modulation of genes involved in sebaceous gland growth and function.[12,13] Decreased levels of estrogen in patients with acne have been found in various studies.[16]All these points can be concluded by the results of our study, showing acne as the predominant condition affecting the facial skin in the study group, that is adolescents.

Seven(6%) patients had seborrheic dermatitis mostly affecting the nasolabial folds. Few had blepharitis and scales over medial part of eyebrows. This finding coincides with the study by Bajaj et al.[19] Seborrheic dermatitis is generally seen only from adolescence onwards. An explanation of this may lie in alterations in sebum that appear to occur at puberty.[20] Sebaceous glands are activated at puberty under the control of circulating androgens resulting in increased sebum secretion during adolescence.[21]

Pigmentary disorders were mainly vitiligo in 1% , freckles in 3% and lichen planus pigmentosus in 1% . This is slightly lower than seen in studies by Sharma et al (6%).[22]

Infectious disorders were mainly tinea faciei, verruca vulgaris, pityriasis versicolor, molluscum contagiosum accounting to 5 % of total patients.

CONCLUSION:

This study was undertaken to throw light on the various cosmetic problems' adolescents girls face owing to physiological and social factors. These various facial lesions can cause more psychological impact in this age group than expected by a dermatologist. Facial dermatoses are common among the adolescents girls. Early diagnosis and proper management with patient education is important to prevent late disfiguring complications and psychological sequelae

PHOTOGRAPHS

Fig 1: ACNE VULGARIS : GRADE 1

Fig 2: TINEA FACIEI

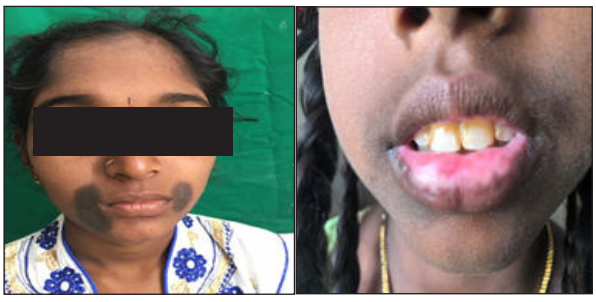

Fig 3: LICHEN PLANUS PIGMENTOSUS

Fig 4: LIP VITILIGO

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