



CLINICAL AND DEMOGRAPHIC PROFILE OF ADULT ACNE – A HOSPITAL BASED OBSERVATIONAL STUDY

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ABSTRACT **OBJECTIVE** - The study was done to observe the clinical & demographic profile of acne in adult patients and the correlation of different types of acne lesions according to age and sex.

MATERIAL AND METHODS- this study was a hospital based observational study conducted on patients who attended OPD of Sawai Man Singh Hospital ,Jaipur.

RESULTS- 150 cases were analysed in this study .Among 150 patients ,86 (57.3%) were males and 64 (42.7%) were females. In the present study maximum number of patients belonged to the age group 25-30 years with 117 patients, followed by 30-35 years with 22 patients. 112 patients had duration of lesions between 5 – 10 years , 24 patients had duration more than 10 years. 52 patients had papules, which was most predominant lesions, nodules & cyst were present in 12 patients. Among 150 patients studied 36 had scars , of which 14 patients had icepick scars .116 (58%) patients had lesions only on the face, 10 patients had lesions on face, back and chest. 23 patients were having seasonal exacerbation, while 31 patients had flares of acne with periods of stress. Out of 150 patients 68 had moderate acne and 14 patients had severe acne. Out of 150 subjects , 11 subjects were having menstrual irregularities, 3 subjects were having seborrheic capitis.

KEYWORDS :Acne , adult , clinical , demographic , profile , hospital

INTRODUCTION-

Acne vulgaris is a inflammatory disorder of the pilosebaceous units characterized by seborrhoea, the formation of open and closed comedones, erythematous papules and pustules and in more severe cases nodules, deep pustules and pseudocysts. It is the most common disorder encounter in day to day practice by dermatologists¹. The term acne is derived from Greek word "acme" which means "prime of life". Although generally considered to be a benign, self limiting condition, but it may sometime cause severe psychological upset or disfiguring scars². It can manifest at any time during life but usually present between ages of 12-24, which estimates 85% of population affected³.

The precise mechanisms of acne are not known but there are four major pathogenic factors⁴:

1. Increased sebum production
2. Hypercornification of pilosebaceous duct
3. Abnormal bacterial function
4. Production of inflammation

Acne being one of the most common skin conditions affecting more than 80% of the adolescent. It primarily is considered a disease of the puberty but there is a rising trend towards increased prevalence of acne in adults¹. Adult acne is defined as acne beyond the age of 25 years². Adult acne has further been categorized into persistent adult acne, late onset adult acne and recurrent acne. Various studies have found persistent adult acne to be the most common type of acne and it is defined as a type of acne which has its onset in the adolescence and continues into adulthood. Late onset adult acne has its onset in the adult life for the first time whereas the recurrent acne is the acne which first appears in adolescence, then remits to again appear in adulthood^{3,4,5}. Late onset adult acne further has been divided in to chin acne which is more inflammatory in females with premenstrual flare ups and a sporadic acne with no such findings

⁶. Hormonal abnormalities have been shown to be associated with adult acne in various studies but other studies didn't find any such association. Adult onset acne pathogenesis involves a complex interplay between endocrine disorders (hyperandrogenism), genetic predisposition, cosmetics, stress and topical applications⁷. This study was undertaken in the Department of Dermatology at a tertiary centre of Jaipur to study the clinical and demographic profile with adult acne and to see for any specific clinical features specific to adult acne.

AIM AND OBJECTIVES-

Aim:

To study the clinical & demographic profile of adult acne at a tertiary care hospital.

OBJECTIVES:

- i) To study the different types of lesion in adult acne patients.
- ii) To study the correlation between types of skin lesion according to age and sex.

MATERIALS AND METHODS–

Study design: Hospital based observational prospective study.

Study site: Department of Dermatology , Venereology and Leprosy, SMS Medical College & Hospital, Jaipur, Rajasthan.

STATISTICAL ANALYSIS:

Continuous data would be summarized in the form of mean and standard deviation.

Count data will be expressed in the form of proportion.

INCLUSION CRITERIA:

- i) All patients of Acne of all stages according to the GAS (Global Acne Scoring) system attending skin OPD who were more than 25 years of age.

ii) Patients of Acne who are willing to participate in the study.

EXCLUSION CRITERIA:

- i) Patients of acne who were less than 25 years of age
- ii) Cases not willing to participate in the study.

**Clinical assessment-
Global Acne Grading System-**

Severity can be classified in four categories according to Global Acne Grading System (GAGS):

- 1) Mild
- 2) Moderate
- 3) Severe
- 4) Very severe

Factors according to location of acne

- Factor 1 - For nose and chin
- Factor 2 - For forehead, right cheek and left cheek
- Factor 3 - For chest and upper back

Each type of lesion is given a value depending on severity: no lesions=0, comedones=1, papules=2, pustules=3 and nodules=4.

- The score for each area (Local score) is calculated using the formula:
- Local score= Factor × Grade (0-4).

The global score is the sum of local scores, and acne severity is graded using the global score.

- 1-18, mild;
- 19-30, moderate;
- 31-38, severe; and
- >39, very severe

RESULTS-

150 cases were analysed in this study. Among 150 patients, 86 (57.3%) were males and 64 (42.7%) were females. (table 1)

In the present study maximum number of patients belonged to the age group 25-30 years with 117 patients, followed by 30-35 years with 22 patients. (Table 2)

112 patients had duration of lesions between 5 – 10 years, 24 patients had duration more than 10 years. (Table 3)

52 patients had papules, which was most predominant lesions, nodules & cyst were present in 12 patients. (Table 4)

Among 150 patients studied 36 had scars, of which 14 patients had ice Pick scars. (Table 5)

116 (58%) patients had lesions only on the face, 10 patients had lesions on face, back and chest. (Table 6)

23 patients were having seasonal exacerbation, while 31 patients had flares of acne with periods of stress. (Table 7)

Out of 150 patients 68 had moderate acne and 14 patients had severe acne. (table 8)

Out of 150 subjects, 11 subjects were having menstrual irregularities, 3 subjects were having seborrheic capitis. (table 9)

Table 1 Sex distribution of study subjects

	Male	Female	Total
No	86	64	150
%	57.3	42.7	100

Table 2. Distribution of subjects according to their age

Age distribution	Male	Female	Total
25-30	72	45	117
30-35	8	14	22
35-40	4	4	8
40-45	2	1	3
Grand Total	86	64	150

Table 3 Distribution of subjects according to duration of disease

Duration	Male	Female	Total
1-5 year	4	10	14
5-10 year	66	46	112
>10 year	16	8	24
Grand total	86	64	150

Table 4 Distribution of subjects according to predominant lesions-

Predominant lesions	Male	Female	Total
Comedones	23	17	40
Papules	28	24	52
Pustules	7	3	10
Nodules & Cyst	8	4	12
Scars	20	16	36
Grand Total	86	64	150

Table 5 Distribution of subjects according to acne scar lesions-

Scars	Male	Female	Total
Ice pick	10	4	14
Rolling Scar	3	9	12
Boxcar	5	2	7
Hypertrophic scar	2	1	3
Grand Total	20	16	36

Table 6 Distribution of subjects according to predominant site lesions-

Predominant site of lesions	Male	Female	Total
Face	66	50	116
Back	4	4	8
Face & Back	5	5	10
Face, Back, Chest	7	3	10
Face, Back, Chest, Arms	4	2	6
Grand Total	86	64	150

Table 7 Distribution of subjects according to aggravating factors-

Aggravating factors	Male	Female	Total
Diet	27	9	36
Stress	23	8	31
Seasonal exacerbation	18	5	23
Steroid application	14	11	25
Cosmetic application	4	20	24
Premenstrual flare	-	11	11
Grand Total	86	64	150

Table 8 Distribution of subjects according to severity-

Severity of Acne	Male	Female	Total
Mild	33	27	60
Moderate	38	30	68
Severe	10	4	14
Very severe	5	3	8
Grand Total	86	64	150

Table 9 Associated conditions in Acne subjects

Associated conditions	No of subjects	
	Male	Female
Acanthosis Nigricans	3	2
Hirsutism	-	2
Menstrual irregularity	-	11
Seborrheic capitis	7	3
Androgenetic alopecia	8	-
Total	36	

DISCUSSION-

Acne is a chronic inflammatory skin disease that primarily affects the face, chest, and Back, with a prevalence of almost 95 percent in adolescents. Several large studies have reported a prevalence of adolescent acne ranging from 81 to 95 percent in young men and 79 to 82 percent in young women^{12,13}. Its prevalence is increasing in the adult population too, particularly in women, even if literature lacks exact data on the subject. The study on adult acne prevalence by Cunliffe et al¹⁴ demonstrated that acne incidence was higher among adolescent men than adolescent women. However, Cunliffe and colleagues found that,

in adults 18 years of age and older, this prevalence decreases for both sexes, but becomes more prevalent in adult women than adult men.

In 1999, Goulden et al¹⁵ confirmed that clinical facial acne affects adult women more frequently than it does men. In this study we observed that among 150 patients, 57.3% were males and 42.7% were females.

The clinical lesions of adult acne are typically considered to be different than those of adolescent acne¹⁶. Furthermore, young men are more affected than young women and generally show the most severe forms of the disease, while adult acne mainly affects women presenting with seborrhea, comedones, and inflammatory lesions.

The evaluation of acne severity in our study showed that “moderate acne” was the most Frequent form of acne in male and female patients, also, in all age groups, the least frequent form was severe acne.

Morphologically, the classical presentation of adult acne consists of inflammatory papulo-pustular lesions in the lower half of the face.

The acne usually presents gradually and is mild-to-moderate in severity, in contrast with adolescent forms. In the literature, two clinical profiles of adult acne have been described¹⁷. One shows hyperseborrhea and non-inflammatory lesions diffuse in all areas of the face with abundant open or closed small comedones, while the other consists of predominant inflammatory lesions, long-lasting nodules, and cysts on the lower one-third of the face, neck, and jawline. This latter type of presentation has been described as “chin acne.” Truncal involvement was reported in 48.4 percent of patients, and, notably, women with truncal acne also had multiple other body areas affected. Other important additional clinical features have been reported, such as post inflammatory hyperpigmentation, scars, which are frequently atrophic and present in 58.8 percent of patients studied. The pathogenesis of adult acne is very complex and remains incompletely elucidated. Similar to adolescent acne, the pathogenesis of adult female acne involves an interplay of excess sebum production, abnormal keratinization within the follicle, and bacterial colonization of the pilosebaceous duct by *Propionibacterium acnes*¹⁸. Furthermore, hormones, the use of cosmetics and/or drugs, and chronic stress have been put forward as possible etiological factors. In another study¹⁹ job stress was associated with more severe forms of acne in women. Women with localized acne were also more likely to report higher stress levels and a psychologically stressful job. Smoking has been related with abnormal follicular keratinization and inflammation through lipid peroxidation of sebum in comedones by inflicting oxidative stress.

CONCLUSION-

Adult with acne are forming a sizeable proportion of OPD attending population. From our study we can conclude that adult over 25 years of age with acne present with more inflammatory lesions localized mainly over the face and regarding the causes of acne in adult age group, various factors have been implicated, still the pathogenesis remains to be elucidated. Various studies have laid emphasis on hormonal abnormalities especially in adult women with acne and hormonal therapy for acne associated with hyperandrogenemia and resistant acne. So further studies are required for proper evaluation.

Declaration of patients consent-

The authors certify that they have obtained written informed consent from all the patients in the form patient(s) / attendants has/ have given his/ her / their consent for his/ her/ their images and other clinical information to be reported in the journal. The patients understood that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity can not be guaranteed.

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