

Study of Clinico-Epidemiological Profile of Acne Vulgaris at JLNMCH, Bhagalpur, Bihar

Vikas Anand¹, Rajeev Ranjan Jha²

¹Assistant Professor (MD DVL), Department of Dermatology, Jawaharlal Nehru Medical College and Hospital, Bhagalpur, Bihar.

²Associate Professor (MD DVL), Department of Dermatology, Jawaharlal Nehru Medical College and Hospital, Bhagalpur, Bihar.

Received: 15-07-2022 / Revised: 20-08-2022 / Accepted: 05-09-2022

Corresponding author: Dr Rajeev Ranjan Jha

Conflict of interest: Nil

Abstract

Background: The pilosebaceous follicle is affected by the multifactorial illness known as acne vulgaris, which is characterised by comedones, papules, pustules, nodules, cysts, and scars.

Methods: From March 2021 to December 2021, this study was carried out at Department of Dermatology, Venereology, and Leprology, JLNMCH, Bhagalpur, Bihar. A total of 75 acne vulgaris outpatient department patients were collected for the investigation.

Results: All 75 respondents (100%) had acne on their face, 22 (29.3%) had it on their back, 65 (86.7%) had it on their cheeks, 16 (21.3%) had it on their chest, and 3 (4.0%) had it on their scalp. The majority of cases of acne vulgaris occur in areas with a high density of pilosebaceous units. In the current study, all of the participants (100%) had facial lesions, 23 (7.7%) had facial and back lesions, and 7 patients (2.3%) had facial, back, and chest lesions.

Conclusion: The age range of 16 to 20 years saw the highest frequency, while females were more frequently impacted. The face is most frequently impacted. The use of cosmetics, stress, and seasonal variations all contribute to the aggravation of acne. To support the findings, additional clinic-epidemiological research in the Indian population is needed.

Keywords: Acne Vulgaris, Epidemiology, Clinical presentation.

This is an Open Access article that uses a funding model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>) and the Budapest Open Access Initiative (<http://www.budapestopenaccessinitiative.org/read>), which permit unrestricted use, distribution, and reproduction in any medium, provided original work is properly credited.

Introduction

Acne vulgaris is a multifactorial condition that affects the pilosebaceous follicle and is characterised by comedones, papules, pustules, nodules, cysts, and scars [1]. Although lesions can develop as early as age 8, acne vulgaris is the most frequent skin condition in teens. Although acne affects boys more frequently and severely than it does girls, it typically affects girls earlier in life and lasts longer, sometimes far into adulthood [2].

Acne vulgaris has a complex aetiology. Genetics, exposure to industrial chemicals, trauma, rubbing from tight clothing, cosmetics, emotional stress, and unfavourable environment are some of the precipitating factors. Increased sebum production, aberrant microbial flora, cornification of the pilosebaceous duct, generation of inflammation, and elevated testosterone levels are the main pathogenesis-related variables. Acne is frequently treated with a variety of topical and systemic medications.

Although oral antibiotics remain the cornerstone of acne treatment, topical therapy has long been a crucial component of a dermatologist's acne treatment plan. One method for treating acne that works well is topical treatment, which also has good therapeutic efficacy [3].

It is important to periodically examine the burden of the disease in hospitals with clinical profile and treatment pattern [4]. Acne is a frequent problem that has significant psychological effects on sufferers. Therefore, the study is necessary to analyse the clinico-epidemiological study and their results with various topical modalities of treatment for Acne Vulgaris and to minimise negative effects like scarring [5]. Therefore, the goal of this study was to identify and confirm numerous clinical manifestations of acne vulgaris in both sexes and various age groups, as well as to confirm them with laboratory tests if necessary.

Results

Table 1: Sex Distribution in different Age groups

Age groups	Sex		Total
	Male n (%)	Female n (%)	
15-20 years	21 (41.2%)	30 (58.8%)	51 (100%)
21-25 years	8 (42.1%)	11 (57.9%)	19 (100%)
Above 25 years	1 (20%)	4 (80%)	5 (100%)
Total	30 (40%)	45 (60%)	75 (100%)

In the age range of 15-20 years, there were 30 (58.8%) females and 21 (41.2%) males. In the age category of 21 to 25 years, there were 11 (57.9%) girls and 8 (42.1%) males. In the category of those older than 25 years, there were 1 (20.0%) males and 4 (80.0%) females.

Table 2: Sex Ratio of Patients

Sex	No. of cases	Percentage
Male	30	40%
Female	45	60%
Total	75	100%

The study population consisted of 30 (40.0%) males and 45 (60.0%) females.

Table 3: Grading of Acne vulgaris

Grade	No. of cases	Percentage
G1	15	20%
G2	25	33.3%

Materials and Methods

Between July 2021 and December 2021, this study was carried out at Department of Dermatology, Venereology, and Leprology, Jawaharlal Nehru Medical College and Hospital, Bhagalpur, Bihar. A total of 75 acne vulgaris outpatient department patients were collected for the investigation. The study included people who were at least 14 years old and of both sexes. Patients with grade IV acne or other infectious disorders were not allowed to participate in the trial. Patients who were lactating or pregnant were also eliminated.

The severity of the condition was graded as follows: Grade-I (mild): Comedones, rare papules, Grade-II (moderate): Papules, comedones, few pustules, Grade-III (severe): Predominant pustules, nodules, sinuses, and Grade-IV (cystic): Mainly cysts, abscesses, widespread scarring.

G3	20	26.7%
G4	15	20%
Total	75	100%

15 (20%) of the study population had acne of grade 1, 25 (33.3%) had acne of grade 2, 20 (26.7%) had acne of grade 3, and 15 (20%) had acne of grade 4.

Table 4: Acne vulgaris distribution according to sites

Site of Acne	No. of cases	Percentage
Face	75	100%
Back	22	29.3%
Cheeks	65	86.7%
Chest	16	21.3%
Scalp	3	4.0%

Discussion

75 patients with acne vulgaris were included in our study; 1.068% of patients visiting dermatology OPD had the condition.

The study population's average age was 20.33±4.05 years. Most of the patients in the current study (63% of all patients) were between the ages of 16 and 20.

All 75 respondents (100%) had acne on their face, 22 (29.3%) had it on their back, 65 (86.7%) had it on their cheeks, 16 (21.3%) had it on their chest, and 3 (4.0%) had it on their scalp. The majority of cases of acne vulgaris occur in areas with a high density of pilosebaceous units. In the current study, all of the participants (100%) had facial lesions, 23 (7.7%) had facial and back lesions, and 7 patients (2.3%) had facial, back, and chest lesions.

Male teenagers were shown to have more severe cases of acne than female teenagers, whereas in later age groups, females tended to have the most severe cases [6].

Although grade 2 acne was more common in males and grade 1 acne was more common in females, our study showed that there was no significant difference in the grade of acne across genders. Compared to men, women experience an earlier start of acne [7].

This might be because females reach puberty earlier, but our study found no evidence of this age differential.

All 75 respondents (100%) had acne on their face, 22 (29.3%) had it on their back, 65 (86.7%) had it on their cheeks, 16 (21.3%) had it on their chest, and 3 (4.0%) had it on their scalp. Acne vulgaris typically appears in areas with a high density of pilosebaceous units [8].

In the current study, all of the participants (100%) had facial lesions, 23 (7.7%) had facial and back lesions, and 7 patients (2.3%) had facial, back, and chest lesions. Adityan *et al.* found that the face was the most often affected place in all acne vulgaris patients (100%) followed by the back, which was affected in 28.2% of cases. Cunliffe and Cotterill discovered that lesions appeared primarily over the face (99%), followed by the back (60%) and chest (15%). About 20.1% of patients had acne on their chest, 9.4% had it on their neck, and 10% had it on their arms [3].

In the 75 patients in the current investigation, females were more frequently impacted and the 16 to 20-year-old age group had a greater prevalence. The face was the area most frequently affected [9,10].

Conclusion

The use of cosmetics, stress, and seasonal variations all contribute to the aggravation of acne. To support the findings, additional clinic-epidemiological research in the Indian population are needed.

References

1. Layton AM. Disorders of the sebaceous glands. In: Burns T, Breathnach S, Cox N, Griffiths C, editors. Rook's Textbook of Dermatology. 8th ed. UK: Wiley-Blackwell; 2010. pp. 42.17–89.
2. Simpson NB, Cunliffe WJ. Disorders of sebaceous glands. In: Burns T, Breathnach S, Cox N, Griffiths C, editors. Rook's Textbook of Dermatology, 7th ed., Oxford: Blackwell Publishing; 2004. p. 43.1.43.75.
3. Adityan B, Thappa DM. Profile of acne vulgaris. A hospital-based study from south India. Indian J Dermatol Venereol Leprol 2009; 75:272-8.
4. Tan JKL, Vasey K, Fung KY. Beliefs and perceptions of patients with acne. J Am Acad Dermatol. 2001; 44: 439-445.
5. Epstein E. Incidence of facial acne in adults. Dermatol Digest 1968; 7:49-58.
6. Rademaker M, Garioch JJ, Simpson NB. Acne in school children: No longer a cause for concern for dermatologists. Br Med J 1989; 298:1217-1219.
7. Lucky AW, Biro FM, Huster GA, Morrison JA, Elder N. Acne vulgaris in early adolescent boys. Arch Dermatol 1991; 127:210-216.
8. Supreeti Biswas, Kanchan Kumar Mondal, Indranil Saha, Rathindra Nath Dutta, Saibendu Kumar. Clinico-epidemiological features of Acne vulgaris: A tertiary hospital – based study. Iranian Journal of Dermatology. 2010; 13 (2).
9. Rothman KF, Lucky AW. Acne vulgaris. Advances in Dermatol 1993; 8:347-373.
10. Pandey SS. Epidemiology of acne vulgaris (Thesis abstract VII). Indian J Dermatol 1983; 28:109-10.