ISSN: 0976-3031

Available Online at http://www.recentscientific.com

CODEN: IJRSFP (USA)

International Journal of Recent Scientific Research
Vol. 10, Issue, 06(I), pp. 33291-33293, June, 2019

International Journal of Recent Scientific Research

DOI: 10.24327/IJRSR

Research Article

CLINICAL PROFILE OF ACNE VULGARIS: ONE YEAR CROSS SECTIONAL STUDY FROM A TERTIARY CARE CENTRE IN SOUTHWEST INDIA

***P.N. Deshpande**

Department of Dermatology, Venereology and leprosy, J. N medical College, Belagavi

DOI: http://dx.doi.org/10.24327/ijrsr.2019.1006.3644

ARTICLE INFO

Article History:
Received 4th March, 2019
Received in revised form 25th April, 2019
Accepted 18th May, 2019
Published online 28th June, 2019

Key Words:

acne vulgaris, clinical profile

ABSTRACT

Acne vulgaris is a very common chronic dermatological disorder in adolescents and young adults. There are very few studies based on clinical profile of acne vulgaris in southwest India. **Aims:** 1. To study demographic parameters in acne vulgaris patients. 2. To demonstrate varied clinical profile of acne patients. Total 100 patients were included in study. Patients of acne vulgaris attending dermatology outpatient department who consented to participate in the study were included. Parameters like age, gender, occupation, duration of lesions, site of lesions, grade of acne, history of topical steroid abuse, history of oily skin, type of acne lesions, history of post-acne scarring were evaluated. Significant association was observed between age and grades of acne. Also females patients had higher grades of acne.Studies elaborating demographic and clinical profile of acne patients may lead to more successful treatment of this ailment.

INTRODUCTION

Acne vulgaris is a chronic inflammatory disorder of pilosebaceous duct, characterized by polymorphic lesions consisting of comedones, papules, pustules, nodules and cysts. It affects up to 80% of adolescents and young adults. While neither life threatening nor physically debilitating, acne can affect social and psychological functioning.[1]

The purpose of this study is to evaluate demographic parameters in acne vulgaris patients and to demonstrate varied clinical profile of acne patients.

MATERIAL AND METHODS

This was a cross-sectional hospital based study. Out of total 25748 patients attending dermatology outpatient department in a tertiary care centre, during study period of one year that is from January 2016 to December 2016, 1287 patients were diagnosed clinically as acne vulgaris. Incidence of acne vulgaris was 5%. Among these 100 cases were selected for present study according to a formula, sample size= z^2pq/d^2 [p=prevalence (83%), q= 100-p, d= error was 8, z for 95% confidence interval=1.96~2]. The patients suffering from all grades of acne vulgaris were included for study. The patients having any other chronic skin diseases and disabling medical disorders were excluded from study. Detailed history was taken for all patients pertaining to socio-demographic data, presenting complaints, duration of acne etc. Thorough physical examination was done for all patients. Cutaneous examination was done on all patients and the following were noted:

1. Site of lesion (face, chest, back or arms)
2. Duration of acne
3. Type of lesion
4. Grade of acne
5. Post acne hyperpigmentation (present/absent)
6. Post acne scars (present/absent)
7. History of oily skin
8. History of steroid abuse

Acne vulgaris was graded into 4 grades based on a grading system proposed by Indian authors.[2]

Acne vulgaris was graded as

Grade I: Comedones and occasional papules
Grade II: Papules, comedones and few pustules
Grade III: Predominant pustules, nodules and abscesses
Grade IV: Mainly cysts, abscesses with widespread scarring.

RESULTS

Comparison of categorical variables between independent groups was done with Chi-square test. Out of total 100 patients, 47 patients were in age group of 20 or less than

Corresponding author:* **P.N. Deshpande
Department of Dermatology, Venereology and leprosy, J. N medical College, Belagavi

20 years. The incidence of acne was higher in females than in males, with female:male ratio 1.0833:1.

Table 1 Duration of acne

Duration of acne	No. of patients	Percentage
<=1yr	47	47.00
1.1-2yrs	36	36.00
2.1+yrs	17	17.00

Table 2 Distribution of lesions of acne

Site	No. of patients	percentage
Face	85	85.00
Face and back	8	8
Face and chest	0	0
Face and arms	1	1
Face, chest and back	5	5
Face, chest and arms	0	0
Face, back and arms	1	1
Face, back, chest, arms	0	0

Face was most common site of acne vulgaris.

Out of total 100 patients maximum number of patients were students (59%). Remaining were servicemen (21%), housewives (7%) and others (13%). Amongst 100, 13 were married (13%) while 87 being unmarried (87%).

Table 3 History of steroid use

Factors	Grade 1	%	Grade 2	%	Grade 3	%	Grade 4	%	Total	Chi-square	P -value
History of steroid use											
Yes	0	0.00	7	50.00	5	35.71	2	14.29	14	1.7400	0.6280
No	7	8.14	47	54.65	24	27.91	8	9.30	86		

Table 4 Grades of acne

Grades of ACNE	No. of patients	Percentage of patients
Grade 1	7	7.00
Grade 2	54	54.00
Grade 3	29	29.00
Grade 4	10	10.00

Table 5 Association between grades of acne and age

Factors	Grade 1	%	Grade 2	%	Grade 3	%	Grade 4	%	Total	Chi-square	p-value
Age groups											
<=20	3	6.38	18	38.30	20	42.55	6	12.77	47	15.0040	0.0200*
21-23	1	4.76	12	57.14	7	33.33	1	4.76	21		
24+	3	9.38	24	75.00	2	6.25	3	9.38	32		

Maximum number of patients with acne fall in less than 20 years of age and in this group maximum number of patients that is 20 have grade 3 acne (42.55%) followed by 18 with grade 2 acne (38.30%) and least number of patients that is 3 in this group have grade 1 acne (6.38%). By applying chi-square test for variables, value is 15.004. P value at 95% confidence interval is 0.020, which being less than 0.05, there exists significant association between age and grades of acne.

Table 6 Association between grades of acne and gender

Factors	Grade 1	%	Grade 2	%	Grade 3	%	Grade 4	%	Total	Chi-square	p-value
Gender											
Male	1	2.08	23	47.92	16	33.33	8	16.67	48	8.5210	0.0360*
Female	6	11.54	31	59.62	13	25.00	2	3.85	52		

Incidence of acne is greater in females (52) than males (48). Maximum number of female patients fall in grade 2 that is 31 (59.62%) and grade 3 that is 13 (25%). The p value is 0.0360 and thus this shows significant association with female gender and grades of acne. This suggested more severity of acne in females.

Table 7 Association between grades of acne and manual picking

Factors	Grade 1	%	Grade 2	%	Grade 3	%	Grade 4	%	Total	Chi-square	p-value
Manual picking											
Yes	2	4.44	18	40.00	17	37.78	8	17.78	45	10.8560	0.0130*
No	5	9.09	36	65.45	12	21.82	2	3.64	55		

There exists significant association between grades of acne and manual picking of acne lesions. As grade of acne increases, percentage of patients with history of manual picking increases. p value of 0.0130 suggests this significant association at 95% confidence interval.

DISCUSSION

In a study done in Tamilnadu, India, 114 patients above age of 15 years were included in study. The mean age was 19.39 years. Furthermore, maximum patients (64%) were among 15–20 years.[3] According to a study done by Aayush Gupta *et al*, which consisted of 100 patients, between the ages of 14–45, mean age was 22.49 ± 5.381 years.[4] The study done by Haritha Samanthula et al revealed that majority (53.2%) of the participants belonged to the age group 16-20 years.[5] Most of the studies [6,7,8,9] have included an age group between 13 and 18 years and some [10,11]studies from 11 years and some [12,13] from 17 years. In our study maximum number of patients were falling in age group of less than 20 .

Female patients outnumbered males in our study. Similar finding was reported by Durai and Nair.[14] In study done by Hazarika N and Rajaprabha R K, facial acne alone constituted 61.4% Cases[3]. Durai and Nair also observed facial acne (99.3%) to be the commonest in their study[14] In our study 14 patients among 100 gave history of use of topical steroid containing preparation. Other studies have not included this factor.

In a study done by Hazarika N, Rajaprabha R K (42%) had acne for less than 6 months meaning patients presented early for treatment.[3] In our study 47 % patients had acne of duration less than 1 year meaning patients presented early for treatment. Our study showed maximum patients with grade 2 of acne vulgaris. These findings were similar to study done by Hazarika N and Rajaprabha R K.[3] While study done by Durai and Nair showed maximum patients with grade 1 acne which was in contrast to our study[15].Limitaion of this study was small sample size. Study of clinical profile of acne vulgaris can help in knowing different parameters affecting acne and better treatment outcomes thus.

CONCLUSION

This study showed a positive and significant relationship between grades of acne and age, meaning higher the grades of acne, higher is the effect of DLQI. Also as grade of acne increases, percentage of patients with history

of manual picking increases. Females outnumbered males in this study and had severe acne. This study was conducted in Southwest India. There are no similar studies from this region.

References

1. Eleni Tasoula, Stamatis Gregoriou, John Chalikias et al. The impact of acne vulgaris on quality of life and psychic health in young adolescents in Greece. An Bras Dermatol 2012; 87, (6): 862–869.
2. Adityan B, Kumari R, Thappa DM. Scoring systems in acne vulgaris.Indian J Dermatol Venereol Leprol. 2009; 75: 3236.
3. Hazarika N, Rajaprabha RK. Assessment of Life Quality Index Among Patients with Acne Vulgaris in a Suburban Population. Indian J Dermatol 2016;61: 163-68.
4. Gupta A, Sharma YK, Dash KN, Chaudhari ND, Jethani S. Quality of life in acne vulgaris: Relationship to clinical severity and demographic data. Indian J Dermatol Venereol Leprol 2016;82: 292-7.
5. Haritha Samanthula1, Madhavi Kodali. Acne and Quality of Life- A Study from a Tertiary Care Centre in South India. Journal of Dental and Medical Sciences 2013; 6(3) :59-62.
6. Jankovic S, Vukicevic J, Djordjevic S, Jankovic J, Marinkovic J. Quality of life among school children with acne: Results of a cross-sectional study. Indian J Dermatol Venerol Leprol 2012;(78):454‑8.
7. Pawin H, Chivot M, Beylot C, Faure M, Poli F, Revuz J, *et al*. Living with acne. A study of adolescent's personal experiences. Dermatology 2007;(215): 308-14.
8. Hanisah A, Omar K, Shah SA. Prevalence of acne and its impact on the quality of life in school‑aged adolescents in Malaysia. J Prim Health Care 2009;(1):20-5.
9. Walker N, Lewis Jones MS. Quality of life and acne in Scottish adolescent school children: Use of the Children's Dermatology Life Quality Index (CDLQI) and the Cardiff Acne Disability Index (CADI). J Eur Acad Dermatol Venereol 2006;(20):45-50.
10. Rapp SR, Feldman SR, Graham G, Fleischer AB, Brenes G, Dailey M. The Acne Quality of Life Index (Acne -QOLI): Development and validation of a brief instrument. Am J Clin Dermatol 2006;(7): 185-92.
11. Jones Caballero M, Chren MM, Soler B, Pedrosa E, Penas PF. Quality of life in mild to moderate acne: Relationship to clinical severity and factors influencing change with treatment. J Eur Acad Dermatol Venereol 2007;(21): 219-26.
12. Lasek RJ, Chre MM. Acne vulgaris and the quality of life of adult dermatology patients. Arch Dermatol 1998;(134):4548.
13. Balkrishnan R, McMichael AJ, Hu JY, Camacho FT, Shew KR, Bouloc A, *et al*.Correlates of health‑related quality of life in women with severe facial blemishes. Int J Dermatol 2006;(45): 111-5.
14. Priya Cinna. T. Durai, Dhanya G Nair. Acne Vulgaris and Quality of Life among Young Adults in South India. Indian Journal of Dermatol 2015;60 (1): 33-40.
15. Salek MS, Khan GK, Finlay AY. Questionnaire techniques in assessing acne handicap: Reliability and validity study. Qual Life Res 1996;5 :131‑8.

How to cite this article:

P.N. Deshpande., 2019, Clinical Profile of Acne Vulgaris: one Year Cross Sectional Study from A Tertiary Care Centre in Southwest India. *Int J Recent Sci Res.* 10(06), pp. 33291-33293. DOI: http://dx.doi.org/10.24327/ijrsr.2019.1006.3644

****