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YOUTH INSIGHT AND UNDERSTANDING OF ACNE VULGARIS -A HOSPITAL BASED STUDY

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ABSTRACT

BACKGROUND: We all have had to experience acne at one time or another in our lives. Acne is a chronic inflammatory dermatological condition that includes clogged pores, pimples and lumps or cysts that occur on the face, neck, chest, back, shoulders, and upper arms. Acne occurs most commonly in teenagers, but is not limited to any age group, afflicting even adults in their forties. However acne is more severe in males, it lasts for a longer duration in females. Acne patients are prone to low self-esteem, low confidence and social dysfunction which may lead to anxiety, depression, obsessive compulsiveness and sometimes suicidal ideation.

The objectives of this study were to access the understanding of the acne vulgaris among youth. It is also to determine the Clinical profile of the disease and gather knowledge beliefs, perceptions and practices of acne patients regarding their condition and their expectations about treatment.

MATERIAL AND METHODS: A cross sectional study was conducted on the patients of acne vulgaris coming to the skin and Venereology department, AIMSR, Bathinda, Punjab, during the months of June and July 2016. The study population comprises of 200 patients of either sexes and above the age of 14 years. The participation was voluntary and an informed consent was taken from all such patients. A pretested questionnaire was used to gather information.

RESULTS: The present study indicates that more than 80% of the patients fall in mild to moderate category. Of the 200 enrolled patients, 48 (22%) patients found to be with Mild severity, 104 (52%) patients with Moderate severity and only 43(22.5%) patients were found to have severe degree of acne vulgaris. In the present study it was found that the awareness regarding the Acne vulgaris is very high and majority of the patients participated in study. They were either consulting the doctor (about 85%) or taking over the counter drugs from pharmacist (about75%) in the form of topical ointment. Knowledge score about acne vulgaris was also measured and it was concluded that dependency on age and education was found to be positive while sex and religion had no direct relation with the understanding of acne vulgaris of patients.

DATA ANALYSIS: After all the data was collected, it was tabulated and analyzed by statistical software SPSS version 20.0 and findings were compared with the previous studies to suggest suitable recommendations.

CONCLUSION: Present study concludes that the awareness regarding the Acne vulgaris is very high in the study population however in spite of being so common and well responsive to treatment; patients had poor practice and unfavorable attitude towards the acne vulgaris occurrence and management. So it is very important to highlight the myths and provide knowledge regarding the disease to the populace.

KEYWORDS : Acne Vulgaris, Knowledge, education

INTRODUCTION:

We all have had experienced acne at one time or another in our lives. Acne is a chronic inflammatory dermatological condition that includes clogged pores, pimples and lumps or cysts that occur on the face, neck, chest, back, shoulders, and upper arms. Acne occurs most commonly in teenagers, but is not limited to any age group, afflicting even adults in their forties. However acne is more severe in males, it lasts for a longer duration in female. [1] It is known to occur in adolescent age group suggesting a hormonal influence and appear earlier in females due to same. However acne is more severe in males. It lasts for a longer duration in females.[2] Acne patients are prone to low self-esteem, low confidence and social dysfunction which may lead to anxiety, depression, obsessive compulsiveness and sometimes suicidal ideation.[3,4]

Acne vulgaris is the most common skin condition seen by the dermatologists.[5] It is a chronic inflammatory disease of pilosebaceous unit characterized by seborrhea, comedones, papules, pustules, nodules, cysts and in some cases scars and keloids, which persist for rest of the life, [6] involving the face affecting more than 85% of the teenagers, as well as some adults. [1] There are effective therapies for acne and administration of these agents can cause an improvement in quality of life and psychological health. [7] Increased awareness and early intervention for the psychological and psychiatric sequelae of acne can benefit patients. Acne is not a trivial disease, the physical, social and psychological morbidity associated with the disease can be profound and the quality of life in sufferers can be severely impaired. [8, 9]

The objectives of this study were to access the understanding of the acne vulgaris among youth and to determine the clinical profile of the disease and gather knowledge beliefs, perceptions and practices of acne patients regarding their condition and their expectations about treatment.

AIMS AND OBJECTIVES: The objectives of this study were to access the understanding of the acne vulgaris among youth and measure their knowledge score and its dependency on age, sex & education of acne patients. Also to determine the clinical profile of the disease, and their expectations about treatment.

MATERIALS AND METHODS:

This was a cross sectional study conducted during June 2016 to July 2016 on the patients of acne vulgaris coming to the skin and Venereology department of private medical college in Punjab. Total 200 patients having acne lesions were included in the study. Both male and female were included in equal numbers. The participation was voluntary and an informed consent was taken from all such patients. Only those patients of acne were included, who were willing to participate in the study and were above the age of 14. Patients with drug-induced and other acneiform eruptions and below the age of 14 years were excluded. Data was collected using a pretested, semi-structured questionnaire. Questionnaire was administered in local language after obtaining verbal consent. The questionnaire consisted of socio-demographic data like age, gender, socio economic status, religion, and marital status and questions to assess knowledge, attitude and practice towards acne and a detailed medical history along with physical examination was undertaken and findings recorded in the proformas. Revised modified B G Prasad classification, Jan 2014 is used to classify socio economic status. Data was entered in SPSS version 20 and analyzed by using appropriate methods. Chi square test was used to determine the association. The level of statistical significance was set to be less than 0.05.

RESULTS:

Table 1: Socio- demographic profile of study subjects

Age (years)	No. of patients	Percentage (%)
14-18	94	47.00
19-22	69	34.50
23-26	15	07.50
27-30	16	08.00
>30	06	03.00
Sex		
Male	100	50.00
Female	100	50.00
SES		
Class 2	44	22.00
Class 3	156	78.00
Education		
Primary	08	04.00
Secondary	47	23.50
Higher Secondary	57	28.50
Graduate and above	88	44.00
Religion		
Hindu	176	88.00
Muslim	24	12.00
Other	00	00.00
Total	200	100.00

Above table shows that majority (47%) of the study population was between 14 -18 years and most of them were belonging to third socio – economic class. Approximately half (44%) were graduate and above.

Table 2: Clinical presentation of Acne Patients

Acne Severity	No. of patients	Percentage (%)
Mild	48	24.00%
Moderate	104	52.00%
Severe	43	21.50%
Don't know	05	02.50%

In Table 2, about 76% of the patients fall in mild to moderate category and 21.5% were found to have severe degree of acne vulgaris and just 2.5% didn't know about the severity of their disease.

Table 3: Knowledge Score

	Knowledge score				
Age (years)	**Poor knowledge**	**Good knowledge**	**Total**	**P value**	**p value**
14-18	30 (32)	64 (68)	94	0.0003167	0.3835
19-22	19 (27)	50 (73)	69	0.0000552	
23-26	3 (19)	12 (81)	15	0.0084719	
27-30	6 (36)	10 (64)	16	0.2615588	
>30	0 (2)	6 (98)	6	0.0003922	
The P value of $\chi 2$ with 4 degree of freedom is 0.3835. Since 0.3835 > 0.05, therefore it is concluded that the knowledge levels of the patients depend on age group.					
Sex					
Male	19 (19)	81 (81)	100	0.0027322	
Female	38 (38)	62 (62)	100	4	
The P value of $\chi 2$ with 1 degree of freedom is 0.002732. Since 0.002732 < 0.05, therefore we reject the null hypothesis and conclude that the knowledge level does not depends on gender at a 5% level of significance					
Education					
Primary	6 (79)	2 (21)	8		
Secondary	11 (23)	36 (77)	47		
Higher Secondary	1 (1)	56 (99)	57	0.000003	
Graduate and above	26 (30)	62 (70)	88		
The P value of $\chi 2$ with 3 degree of freedom is 0.000003. Since 0.000003 < 0.05, therefore we reject the null hypothesis and conclude that the knowledge level does not depends on Education at a 5% level of significance					
Religion					
Hindu	18 (10)	158 (90)	176		
Muslim	7 (28)	17 (62)	24	0.03133	
Other	0	0	0		
Total			200		

The P value of $\chi 2$ with 2 degree of freedom is 0.03133. Since 0.03133 < 0.05, therefore we reject the null hypothesis and conclude that the knowledge level does not depends on Religion at a 5% level of significance

Table 4: Knowledge and attitude regarding the effect of Life style factors on Acne vulgaris

Effect on Acne by	Worsen N (%)	Improve N (%)	Don't affect N (%)	Don't know N (%)
Chocolate & snacks	162 (81)	2 (1)	18 (9)	18 (9)
Alcohol	88 (44)	6 (3)	20 (10)	84 (42)
Washing frequently	48 (24)	122 (61)	16 (8)	14 (7)
Fatty foods	146 (73)	10 (5)	24 (12)	20 (10)
Dairy products	62 (31)	30 (15)	80 (40)	28 (14)
Not washing face	156 (78)	14 (7)	18 (9)	12 (6)
Menstrual cycle	116 (58)	14 (7)	12 (6)	58 (29)
Mood	130 (65)	14 (7)	24 (12)	32 (16)
Stress	142 (71)	6 (3)	20 (10)	32 (16)
Repeatedly touching or squeezing spots	152 (76)	24 (12)	6 (3)	18 (9)
Cigarettes	118 (59)	9 (4.5)	13 (6.5)	60 (30)
Pollution	166 (83)	12 (6)	6 (3)	16 (8)
Sunlight	149 (74.5)	13 (6.5)	18 (9)	20 (10)
Make up	166 (83)	14 (7)	9 (4.5)	11 (5.5)
Physical inactivity	114 (57)	26 (13)	32 (16)	28 (14)
Overweight	122 (61)	16 (8)	20 (10)	22 (21)
Cannabis	106 (53)	6 (3)	12 (6)	76 (38)
Sweating	140 (70)	27 (13.5)	6 (3)	27 (13.5)
Any other	74 (37)	3 (1.5)	9 (4.5)	114 (57)

Table 4 shows that majority of the respondents encountered with following cause of acne in one way or other - consuming chocolates/spicy foods (>80%) and oily foods (>60%), pollution (83%), makeup (83), overweight (61), sweating (70%), not washing face (78%)and repeatedly touching or squeezing (76%). Whereas about 57% of the participants consider physical inactivity as the contributor in development of acne vulgaris.

Table 5: Understanding of Acne vulgaris during the course of disease by the young patients

Acne need to be treated	Yes N (%)	No N (%)	Don't Know N (%)
With cosmetic methods?	52 (26)	138 (69)	10 (5)
With products purchased in general stores?	38 (19)	144 (77)	8 (4)
With personal hygiene products?	180 (90)	12 (6)	8 (4)
With disinfectants (alcohol, "Hexomedine®")?	44 (22)	142 (71)	14 (7)
With ointments provided by a pharmacist?	136 (68)	44 (22)	10 (5)
With topical medicines prescribed by a doctor?	174 (87)	22 (11)	4 (2)
With oral medicines prescribed by a doctor?	156 (78)	21 (10.5)	13 (6.5)
By going to a psychologist?	52 (26)	142 (71)	6 (3)
By having a healthy lifestyle?	160 (80)	28 (14)	12 (6)
By alternate therapy?	134 (67)	44 (22)	22 (11)

Table 5 shows that more than 80% of the acne patients wanted to seek the treatment from the doctor, whereas about 70% admitted taking over the counter drugs from pharmacist in the form of topical ointment. Most of the patients believed that healthy life style (80%), and personal hygiene (90%) are the foremost preventive means to avoid acne vulgaris. There was a slight preference for topical ointment over oral medicine in the youth. Cosmetic products, products from general store and disinfectants were used by about 20% of acne patients participated in study. Nearly 26% of the patient contacted the psychologist for the related problems.

DATA ANALYSIS: After all the data was collected, it was tabulated and analyzed by statistical software SPSS version 20.0 and findings were compared with the previous studies to suggest suitable recommendations.

DISCUSSION

Acne is a multi-factorial condition, commonly seen in adolescents all over the world. Increased sebum excretion, colonization of the pilosebaceous duct with Propionibacterium acnes and resultant inflammation play a critical role in pathogenesis. A lot of misconceptions surround acne. The knowledge about acne is still lacking with unfavorable attitude and wrong practices. It becomes essential to know the patient's knowledge about acne as it plays an important part in the management and better compliance.

Clinical Profile: A degree of acne affects nearly all people. In this study severity of acne was found to be moderate in nearly half of the patients and severe in about 21% patients respectively. Similar studies by Law MPM et.al and Wei B et al [10, 11] have reported moderate to severe Acne vulgaris in 15–20% of young people.

Knowledge towards acne: The knowledge regarding life style factors was assessed by asking questions regarding their dietary habits, physical activities and their social behavior. It is a well known fact that there is no relation between diet of any kind and acne, however, majority of the respondents in our study were not aware of this fact and believed that consuming chocolates/spicy foods (>80%) and oily foods (>60%) were the cause of acne in one way or other. This is in comparison with the results found in a study done by Darwish MA et.al where nearly 80 and 30 percent opined that consuming chocolates or spicy foods caused acne. Similarly 54% in the same study also believed that oily foods can cause acne [12]. In another study by *Hulmani M et al.* [13] the patients believed that consuming chocolates/spicy foods (63%) and oily foods (70%) cause acne.

The acne disease developing in adulthood more than other people; possible reasons for this are diet, lifestyle and more synthetic hormones in our environment (foods, water, plastics and medication)[14]. With the onset of puberty, the human body starts to produce hormones called androgens or male sex hormones, increasing in both boys and girls enlargement and over stimulation of the sebaceous glands which are found in the hair follicles or pores of the skin [15]. These androgens cause the extra sebum or oil that produces by the sebaceous glands mixes with dead skin cells and bacteria on the skin's surface and this block pores. Within the blocked pore, bacteria multiply and cause inflammation. All of this leads to the lesions that are associated with acne [16]. Similarly in the present majority of the patients (75.6%) agreed that Acne vulgaris was related to hormonal imbalance.

Several reports have been published regarding the association of increased level of cortisol and emotional stress [17]. In the present study, 71% of the patients believed that acne can be aggravated by stress. In a study done by *Hulmani M et al.* [13], the knowledge regarding the association with stress was 51%. Similar findings of aggravation have been reported in majority of the study subjects in number of studies.[3, 12] In the present study about 58% of females' associated Acne vulgaris with Menstrual period, the possible explanation is hydration-induced cyclical narrowing of the pilosebaceous orifice between days 16-20 of the menstrual cycle. It was seen that Smoking, pollution, Sunlight and makeup (>80%) were also reported to have a significant casual association with the acne vulgaris.

Understanding of acne vulgaris: In the present study it was found that the awareness regarding the Acne vulgaris is very high and majority of the patients participated in study. They were either consulting the doctor (about 85%) or taking over the counter drugs from pharmacist (about75%) in the form of topical ointment, which is similar to the results in a study done by Hulmani M et al. [13], where over the counter medications were practiced by 74% and in same study 46% were in favor of consulting a doctor and this attitude is in line with the practice where 45% consulted a dermatologist when they had acne last time. Most of the patients about 80-88% were of view that Healthy life style and personal hygiene is the main preventive way to avoid acne vulgaris.

Knowledge score about acne vulgaris was also measured and it was concluded that dependency on age and education was found to be positive while sex and religion had no direct relation with the understanding of acne vulgaris of patients.

CONCLUSION: Present study concludes that the awareness regarding the Acne vulgaris is very high in the study population however in spite of being so common and well responsive to treatment; patients had poor practice and unfavorable attitude towards the acne vulgaris occurrence and management. So it is very important to highlight the myths and provide knowledge regarding the disease to the populace.

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