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Original Research Article

Knowledge, attitude and practice towards acne vulgaris among acne patients

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ABSTRACT

Background: Acne is a chronic inflammatory disease known to occur in adolescent age group. There are many myths and misconceptions in patients as well as health physicians regarding the causes and treatment of acne. Objective of the study was to assess the knowledge, attitude and practice towards acne vulgaris among acne patients attending skin outpatient department in a private medical college.
Methods: This is a cross sectional, questionnaire based study conducted between January - April 2016. 100 patients having acne lesions were included in the study.
Results: Majority of the study subjects belonged to the age group 15-24. The study showed that 72% had good knowledge. More than half of the study subjects had wrong belief that eating oily foods, chocolates, spicy food caused acne but more than 40% of the study subjects had good knowledge about the causes and aggravating factors like it worsens by squeezing/picking/rubbing (83%), commonly found in oily skin (67%), has seasonal occurrence (54%), associated with premenstrual flare (42%), aggravated with use of cosmetics (41%).
Conclusions: The acne patients had poor practice and unfavorable attitude in spite of good knowledge. Many myths exist among patients. Despite being so common and very well responsive to treatment, it is a major cause of depression among patients.

Keywords: Knowledge, Attitude, Practice, Acne vulgaris

INTRODUCTION

Acne is a chronic inflammatory disease of pilosebaceous glands. It is known to occur in adolescent age group suggesting a hormonal influence. Also the initiation of acne lesions is earlier in females suggesting a hormonal role. However acne is more severe in males. It lasts for a longer duration in females. It is the most common disease of the skin.[1] Recent studies have also implicated the role of diet in the pathogenesis of acne.[2] Although a common disease, it is a known cause of distress and depression if left untreated.[3] There are many myths and misconceptions in patients as well as health physicians regarding the causes and treatment of acne.[4]

Since it has many misconceptions and multi-factorial causation, the knowledge, attitude and practices regarding acne hold a major significance in the etiopathogenesis and outcomes of acne patients. To the best of our knowledge no Indian study exists depicting the Indian perspective of knowledge, attitude and practice of acne. Thus our study was conducted to assess the knowledge, attitude and practice towards acne vulgaris among acne patients attending skin outpatient department in a private medical college.

METHODS

This was a cross sectional study conducted during January 2016 to April 2016 in outpatient department of a private medical college in Karnataka. 100 patients having acne lesions were included in the study. Patients with acne vulgaris not willing to participate in the study, patients aged <15 years and patients with drug-induced and other acneiform eruptions 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. Revised modified B G Prasad classification, Jan 2014 is used to classify socio economic status.[5] Data was entered in excel sheet and represented in frequency and percentage. Chi-square test was used to determine the association. The level of statistical significance was set to be less than 0.05.

RESULTS

There was equal distribution of study subjects with respect to gender. Majority of them belonged to 15-19 years age group. Table 1 illustrates about the socio-demographic characteristics of the study subjects. Assessment of knowledge about causes and aggravating factors among study sample is shown in Table 2. Table 3 displays factors affecting total knowledge score about causes and aggravating factors of acne among the study subjects. Score less than 8 and greater than or equal to 8 is considered as poor and good knowledge about acne vulgaris respectively. Table 4 and 5 shows the attitude and practice of study subjects towards acne vulgaris.

Table 1: Socio-demographic characteristics of the study subjects.

Variables	Number	%
Age (in years)		
15-19	44	44.0
20-24	33	33.0
25-29	16	16.0
≥ 30	7	7.0
Sex		
Male	50	50.0
Female	50	50.0
SES*		
Class 2	17	17.0
Class 3	83	83.0
Family History		
Yes	8	8.0
No	92	92.0
Education		
Primary	4	4.0
Secondary	21	21.0
Higher Secondary	26	26.0
Graduate	49	49.0
Religion		
Hindu	68	68.0
Muslim	32	32.0
Total	**100**	**100.0**

*Revised modified BG Prasad socioeconomic classification scale, January 2014.

Table 2: Knowledge about causes and aggravating factors in study subjects.

Factors	Yes	No	Don't know
Consuming chocolate/spicy food*	63	21	16
Eating oily food*	70	18	12
Oily skin	67	33	00
Worsening by squeezing/picking/rubbing	83	02	15
Use of cosmetics	41	21	38
After facial/ parlour treatment **Inheritance**	22 35	18 24	60 41
Seasonal occurence	54	13	33
Associated with premenstrual flare	42	12	46
Aggravated by stress	51	27	22
Aggravated in pregnancy	17	21	62
Common site – face	87	0	13

*indicate wrong answer

Table 3: Factors affecting total knowledge score about causes and aggravating factors of acne among study sample.

Variables	Total Knowledge Score			*P* value
	Poor	Good	Total	
Age (in years)				
15-19	10 (22.7)	34 (77.3)	44 (100.0)	0.022
20-24	9 (27.3)	24 (72.7)	33 (100.0)	
25-29	9 (56.3)	7 (43.8)	16 (100.0)	
≥ 30	0 (0.0)	7 (100.0)	7 (100.0)	
Sex				
Male	11 (22.0)	39 (78.0)	50 (100.0)	0.181
Female	17 (34.0)	33 (66.0)	50 (100.0)	
SES*				
Class 2	0 (0.0)	17 (100.0)	17 (100.0)	0.005
Class 3	28 (33.7)	55 (66.3)	83 (100.0)	
Family History				
Yes	1 (12.5)	7 (87.5)	8 (100.0)	0.309
No	27 (29.3)	65 (70.7)	92 (100.0)	
Education				
Primary	3 (75.0)	1 (25.0)	4 (100.0)	0.003
Secondary	0 (0.0)	21 (100.0)	21 (100.0)	
Higher Secondary	8 (30.8)	18 (69.2)	26 (100.0)	
Graduate	17 (34.7)	32 (65.3)	49 (100.0)	
Religion				
Hindu	18 (26.5)	50 (73.5)	68 (100.0)	0.620
Muslim	10 (31.3)	22 (68.8)	32 (100.0)	
Total	28 (28.0)	72 (72.0)	100 (100.0)	

*Revised modified BG Prasad socioeconomic classification scale, January 2014

Table 4: Attitude of acne patients towards acne vulgaris.

Attitude variables	No.	%
If you get acne lesions, what will you do		
Put traditional Medicine	42	42.0
Consult Doctor	46	46.0
Do nothing	12	12.0
Total	100	100.0
Do you feel depressed when you get acne		
Yes	81	81.0
No	19	19.0
Total	100	100.0

Table 5: Practice of acne patients towards acne vulgaris.

Practice Variables	No.	%
Self care includes:		
Not answered	62	62.0
Face wash	29	29.0
Drinking water	2	2.0
Proper diet	6	6.0
Aloe Vera	1	1.0
Did you consult a dermatologist last time when you got acne		
Yes	45	45.0
No	55	55.0
Do you take over the counter medication		
Yes	26	26.0
No	74	74.0
Did you apply ayurvedic medication on lesions		
Yes	44	44.0
No	56	56.0
Total	**100**	**100.0**

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.

Knowledge towards acne

Although there is no relation between diet of any kind and acne, majority of the respondents in our study were lacking such information and believed that consuming chocolates/spicy foods (63%) and oily foods (70%) cause acne. This is better than the results found in a study done by Darwish MA 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.[6] In a study done by Al-Hoqail IA, 72% believed that diet is an etiologic factor of acne.[6,7] Su P et al., found that the most common foods associated with acne were spicy or fried foods whereas chocolate was not found to be the cause by many people.[8]

67% knew that oily skin is prone for acne. A similar study done on Nepali school students showed that 96% knew that acne occurs in oily skin.[9]

83% knew that acne lesions worsened by squeezing, picking or rubbing. This is in line with the study done on French individuals where 75% knew that acne lesions worsen by squeezing.[10] This observation is in contrast to that found in the study done by P Ganga where only 37% knew that acne worsened by these acts.[9] Interestingly, S Al Mashat in his study found that 11% of the study subjects thought that acne would improve by picking or squeezing.[11]

41% told that acne is associated with use of cosmetics where as 53% and 58% of the study sample in a study done by Darwish MA and Poli F knew that use of cosmetic products aggravated acne.[6,10] Conversely, CM Tahir found only 16% considered cosmetics as an aggravating factor for acne in his study.[12]

Genetic factors play an important role in the pathogenesis of acne. The susceptibility of keratinocytes to the antiproliferative effects of vitamins A and D has been reported.[13] In the present study, genetic relation was known to 35% in our study. Similar finding (38%) was reported by Tan JK but CM Tahirand Uslu G found only 12% and 10 % of their study subjects relating acne to inheritance.[14,12,15]

It has been suggested that chronic stress might be a possible cause of increased androgen secretion in some of the women, resulting in the pathogenesis of acne in such patients.[16] Several such reports have been published regarding the association of increased level of cortisol and emotional stress.[17] In the present study, 51% knew that acne can be aggravated by stress. Similar findings of aggravation has been reported in more than half of the study subjects in many studies.[3,6,7,11,12]

Studies have shown that acne occurs more in summers than winters.[18] It is possible that UV radiation, which may cause inflammation and generate squalene peroxides which are highly comedogenic, may play a role in the persistence of acne in tropical countries, in addition to sweating and increased humidity.[19]

Pregnancy is also known to aggravate acne lesions. Steroids have been implicated in causation of acne by inducing hypercornification of the upper portion of pilosebaceous unit.[20]

Face, chest and back have a high sebaceous gland activity with an excessive growth of propionibacterium acnes within sebaceous gland duct, that makes these site prone for acne.[21] In our study, 87% told that face was the common site where acne lesions presented more where as Tan JKL found only 26% who knew that acne usually affects face, neck and chest.[9]

Premenstrual flare of acne reportedly occurs in 70% of female acne patients. The explanation offered is hydration-induced cyclical narrowing of the pilosebaceous orifice between days 16-20 of the menstrual cycle. Progesterone and estrogen have pro- and anti-inflammatory effects, and alteration or modulation of these hormones may be another explanation.[21] In our study, 42% related aggravation of acne during menstruation. Similar results were reported in other studies.[6,8,10]

Regarding knowledge score, 72% had good knowledge about the causes and aggravating factors of acne. There was significant association between knowledge score and age, SES and education (p <0.05). This study shows a better knowledge score compared to other studies.[4,6,9]

Attitude and practice towards acne

46% were in favour of consulting a doctor and this attitude is in line with the practice where 45% consulted a dermatologist when they had acne last time. This is comparable to the study done by Poli F, 32% did not report to a dermatologist believing acne would resolve spontaneously.[10]

Majority of the study subjects did not answer for the self care practices done to prevent acne. 29% told that they wash their face regularly to prevent from acne. This is in contrast to other study findings where frequent face washing was practiced to ameliorate acne.[6,10,11,22]

Over the counter medications were practiced by 74%. Similar results were observed by Brajac I where most of them used medical creams as over the counter medication to treat acne.[4]

In our study, 81% felt depressed when they got acne. Interestingly, only 54% self-reported stress because of acne in Darwish MA study.[6]

CONCLUSION

Present study concludes that the acne patients had poor practice and unfavorable attitude in spite of good knowledge. Many myths exist among patients. Despite being so common and very well responsive to treatment, it is a major cause of depression among patients.

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