EVALUATION OF COMMON RISK FACTORS OF ACNE IN TEENAGERS IN BATTICALOA DISTRICT

Kartheepan,K[1], Suhail,A[2], Mithuna,V[3] and Prianka,L[4]
[1]Dept.of Primary Health Care, Eastern University of Sri Lanka, Sri Lanka
[2]Teaching Hospital, Batticaloa, Sri Lanka
[3]Provincial General Hospital, Badulla, Sri Lanka
[4]Teaching Hospital, Anuradhapura, Sri Lanka

vetkartheepan@yahoo.com, suhailazhar2013@gmail.com, vimalmithu12@gmail.com
and prianka532@gmail.com

ABSTRACT: Acne, or acne vulgaris, is a common skin problem that starts when oil and dead skin cells obstruct the pores. It is leads to psychological dissatisfaction of personality specially among teenagers and adolescents all over the world, including Sri Lanka. In the recent years concern raised regarding acne without gender difference, because people like to be pretty and attractive in the society. Furthermore, majority of the school students are worried about the impact of acne as they are prone to suffer by acne and they naturally feel to be pretty because of their young stage and psycho social believes and thoughts. Therefore, this study was intended to recognize and evaluate the risk factors of acne among school teenagers of Batticaloa district. Respondents of the study included the students from four leading schools in the Batticaloa during the study period. Data collected by interviewer administered questionnaire with the permission of relevant principals of the school. Analysis of data performed by statistical software (SPSS 16.0) and p value <0.05 was considered as significant for all analysis. Majority of participant were Tamil (141=73.44%) ethnic group and most of them resided at urban 136 (70.83%) local authority. The skin type of more than half of the respondents was oily. Onset age of acne lesions for many respondents (39=20.31%) was 16 years. Almost most of them (187=97.40%) had the acne lesion on the face. Acne marks significantly (X^2=38.342, p=0.000) leads to major psychological worries on males compared to female students. Food habit with oily meals had significant association to the development of acne, (X^2=58.521, p=0.000). Food habit, Body weight, types of skin were identified as the most significant risk factors. Marks of acne is the very serious end results and which has the significant impact on formation of psychological problems among the students specifically in males.

Keywords: Acne, Batticaloa, Teenagers

1. INTRODUCTION

Acne vulgaris (Common Acne) is a long - term skin condition characterized by areas of blackheads, whiteheads, pimples, greasy skin and possibly scarring. Furthermore, it is a disorder of the hair follicles of the face, chest, and back that affects almost all males and females during puberty; the only exception being teenage members of a few primitive isolated tribes living in Neolithic societies. It is not caused by bacteria, although bacteria play a role in its development. It is usual for some women to develop acne in their mid- to late-20s.

Acne vulgaris is a common problem among teenagers and adolescents all over the world, including Sri Lanka. In the recent years so many concern raised regarding acne, because naturally most of the people feel that, they like to be pretty and attractive, not only the females, but alsothe males very much concern about their

appearance and face. And also some forms of acne are really problematic and cause many psychological as well as cosmetic impacts on the people. So many fairness creams, mark and pimple-free creams are introduced in the market and they are very popular because of the development of mass media.

During Dermatology clinical clerkship, it was observed and noted that, so many teenagers were coming to the Dermatology Clinic of Teaching Hospital, Batticaloa for the treatment of acne. And being were adolescents, the investigators of this study had same problem.

Because of above facts that induced the investigators to conduct a scientific study on the common risk factors of acne in Sri Lanka and more precisely in Batticaloa district. And the investigating team believed that this study will be provided some valuable information regarding this common problem of acne and the common risk factors.

The study was aimed to identify and asses the most common risk factors of Acne vulgaris in Batticaloa among the school- going teenagers, mainly aged between 16 and18 years.

2. METHODOLOGY

It was the cross sectional descriptive study carried out at 4 leading schools in Batticaloa town area and the schools were Bt/ Vincent Girls' High School, Bt/St/ Cecilia's Girls' National School, Bt/St/ Michaels College and Bt/Mt/ Central College during May, 2012 to December, 2012.

Data was collected by the investigators from the participants of this study through the interviewer administered questionnaire after obtaining informed written consent by participants and the written permission from the relevant Principals of the school.

Statistical software (SPSS 16.0) was used to analyze the data and p-value < 0.05 was considered significant for all analyses. Ethical clearance certificate was obtained from Ethical Review Committee, Faculty of Health - Care Sciences, Eastern University, Sri Lanka.

3. RESULTS AND DISCUSSION

Total respondents of the study were 192 students, among them 97 (50.52%) were males and 95 (49.48%) were females. The age of the students categorized as 16 (76=39.58%), 17 (53=27.60%), 18 (60=31.25%) and more than 18 (3=1.56%) years. According to the ethnicity students were classified as Tamils (141=73.44%) and Muslims (51=26.56%). 136 (70.83%) participants resided at urban area while 56 (29.17%) were resided at rural area.

The family income of the respondents classified as less than 10,000 LKR (36=18.75%), between 10,000 and 20,000 LKR (96=50.00%) and more than 20,000 LKR (60=31.25%). Regarding the body weight of the students, they divided into three groups as over weight (17=8.85%), average body weight (148=77.08%) and underweight (27=14.09%).

Based on the type of skin respondent grouped into oily skin (104=54.17%), normal skin (82=42.70%) and dry skin (6=3.13%). The lesions of acne was onset on the students when they were 10 (1=0.52%), 11 (3=1.56%), 12 (10=5.21%), 13 (21=10.94%), 14 (41=21.35%), 15 (70=36.46%), 16 (39=20.31%), 17 (2=1.04%), and 18 (5=2.60%) years old while it was progressed without any changes of lesions in 63 (32.81%), increased in 44 (22.92%) and reduced in 85 (44.27%) students.

Almost most of them (187=97.40%) had the acne lesion on the face while rest (5=2.60%) had on the other area of the body. It was significant about the location of acne (X^2=184.083, p=0.000). Lesions of acne on the face distributed into different anatomical regions as follows on forehead, cheek, nose, chin and neck with specific numbers of the students 127(67.91%), 170(90.90%), 88(45.83%), 48(25%) and 6(3.12%) respectively.

The marks of acne observed significantly (X^2=88.021, p=0.000) as the serious consequence. There was higher significant association between acne marks and the psychological problems of the students, (X^2=102.594, p=0.000). And it was significantly (X^2=38.342, p=0.000) noted in males were more worried compared to the females. At the same times, there was positive correlation between types of skin and the progression of acne marks with significant impact (X^2=7.304, p=0.026) with higher involvement in oily skin.

Food habit with oily meals had significant association to the development of acne, (X^2=58.521, p=0.000). Furthermore, males were seeking fast food compared to the females with significant interest (X^2=6.379, p=0.012), eventually it was one of risk factor of development of acne.

Significant (X^2=19.240, p=0.000) relationship observed between the status of the body weight and the sex of the students and males were more prone to overweight which is positively correlated with formation of acne.

Table-1- Significant risk factors of acne in school teen agers

Variables		Number	Percentage
Food Habit	Vegetarian	24	12.50
	Non vegetarian	168	87.50
Body weight	Over weight	17	8.85
	Normal	148	77.08
	Lower weight	27	14.09
Skin type	Oily	103	53.60
	Normal	83	43.20
	Dry	06	03.20

Table-2- Significant findings of cross tabulation of risk factors

Variables	Chi-Squqre value	p-value	Status of significance
Sex vs Location of Acne	184.083	0.000	Significance
Marks vs Psychological problem	102.594	0.000	Significance

Oily food vs Sex	58.521	0.000	Significance
Sex vs Body weight	19.240	0.000	Significance
Sex vs Psychological problems	38.342	0.000	Significance
Sex vs Fast foods	6.379	0.009	Significance
Marks vs Skin type	7.304	0.026	Significance

4. CONCLUSION

Food habit, Body weight, types of skin were identified as the most significant risk factors while the sex and adherence of hygienic practices observed as moderate levels risk factors. Marks of acne are the very serious end results and which has the significant impact on formation of psychological problems among the students specifically in males.

The awareness programs and the strategic plans to prevent and control the acne among school teenagers is inevitable to eliminate the fears regarding acne among school teenagers. And its recommended to conduct the future elaborative study include the rural school of the Batticaloa district.

5. REFERENCES

AKTAN,S, OZMEN,E, SANLI,B. (2000) Anxiety, depression and nature of acne vulgaris in adolescents. Indian Journal of Dermatology; 39:354–7.

BATYA,B, DAVIDOVICI, RONNI WOLF. (2010) The role of diet in acne: facts and controversies, Clinical Dermatology, Elsevier; 28: pp.12-16

DESSINIOTI,C, KATSAMBAS,A.D. (2010) The role of Propionibacterium acnes in acne pathogenesis: facts and controversies, Clinical Dermatology, Elsevier; 28 (1): pp.2-7

KUROKAWA, ICHIRO, et al. (2009) "New Developments in Our Understanding of Acne Pathogenesis and Treatment."*Experimental Dermatology"* 18: pp.821-832.

RAJKUBBA, A,K, BAJAJ, DM, THAPPA, et al. (2009) Indian Journal of Dermatology, Venereology & Leprology Year : Volume : 75   Issue : 7 pp. : 3

REBECCA,A, Acne vulgaris ,Oxford Journals, Volume 1, Issue 7 ,pp. 470-473.

SCHAFER,T, NIENHAUS,A, VIELUF,D, BERGER,J, RING,J. (2001) Epidemiology of acne in the general population: the risk of smoking, British Journal of Dermatology; 145(1): 100-4.

SZABO,K, KEMENY,L. (2011) Studying the genetic predisposing factors in the pathogenesis of acne vulgaris, Journal of Human Immunology; 72(9):766-73.