Factors Associated with Prevalence of Acne under the age of 25 years in the skin Outdoor Patient Department of Allied Hospital, Faisalabad

SIBGHA KANWAL, MUHAMMAD HARIS ZAMAN, NATASHA IRFAN

ABSTRACT

Aim: To identify factors associated with prevalence of acne in skin outdoor patient department of Allied hospital Faisalabad.

Methods: The study was conducted in Skin OPD allied hospital Faisalabad. Factors associated with prevalence of acne under the age of 25years were recorded using non probability convenient sampling.

Results: In our study population 80% people have oily skin, 83.3%use cosmetics, 73% among females, 63.3% have positive family history, 70% are unmarried and 40% are in age group of 14 to 17 years, 53% have stress factor, 46%in junk food eaters.

Conclusion: Acne is a major issue in itself and also gives rise to many other problems including skin cancer, eczema, scar marks, nodules and cysts, whiteheads, blackheads, lumps and bumps which causes significant emotional disturbance. Knowing the risk factors for acne may help in promoting awareness among people for prevention of acne.

Keywords: Acne Risk factors, skin OPD Allied Hospital, Faisalabad

INTRODUCTION

Acne is a common human skin disease, characterized by areas of seborrhea (scaly red skin), come dones (blackheads and whiteheads), papules (pinheads), nodules, pimples and possibly scaring. Aside from scarring, its main effects are psychological, such as reduced self-esteem.[1]In very extreme cases acne vulgaris may even results in depression or suicide[2]. One study has estimated the incidence of suicidal ideation in patients with acne as 7.1%[3]. In adolescence, acne is caused by an increase in androgens which occurs during puberty, regardless of sex. It affects an estimated 80-90% of teenagers in the western world[4]. In 2010 it was estimated to be the 8th most common disease globally affecting 650 million people.5For most people, acne diminishes over time and tend to disappear by age 25.6 Some individuals will, however, carry this condition into their thirties, forties and beyond.

Although acne is often considered "a superficial nuisance" and physical scarring acne account for less than 20% yet, the burden of this condition on adolescent's life and mental status can be life long and hard to heal.8It results in psychological and social problems. Evidence show high prevalence of psychological morbidities in acne patients, lower self-esteem and decreased quality of life.[7]

We are conducting this study to identify the factors associated with and causing increased prevalence of acne in the region of Faisalabad. Our study is based on observing relationship of acne with age, psychological stress, exposure to pollution, poor hygiene, oily food, less water intake and use of cosmetics, all of which are considered to be important factors associated with acne. This will help in awareness of people regarding major risk factors associated with acne. Once identified, the factors can be avoided thus reducing acne prevalence and its severity in this region.

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[1]Department of Paeds Services Hospital, Lahore.
[2]Emergency Medical Officer, Mayo Hospital, Lahore.
[3]MBBS Fourth Year Student, Fatima Jinnah Medical University, Lahore
Correspondence to: Dr. Sibgha Kanwal, Cell: 03214580249,
Email: doctorsk33@gmail.com

METHODS

The study performed was cross-sectional study carried out at Skin OPD allied hospital Faisalabad. Duration of study 4th august, 2014 to 31 august, 2104

Study population includes all men and women under 25 years of age in skin outdoor patient department Allied hospital Faisalabad .Sampling technique used was Non probability convenient sampling Sample size taken was 30.

Structured and closed ended questionnaire was formed, it was pretested and face to face interview was conducted .Data was analyzed on Microsoft Excel and results were expressed by taking percentage and using bar diagrams in Microsoft word. Questionnaire included age, gender, family history, urban/rural, any stress factor, use of junk food , type use of fresh fruits vegetables and water.

No significant ethical issues. Informed consent was taken from all patients. Permission was taken from head of skin department, Allied Hospital Faisalabad.

RESULTS

Fig. 1: Out of 30 people studied 22(73%) were female and 8(27%) were male. It shows strong association that female at more risk of developing acne than male
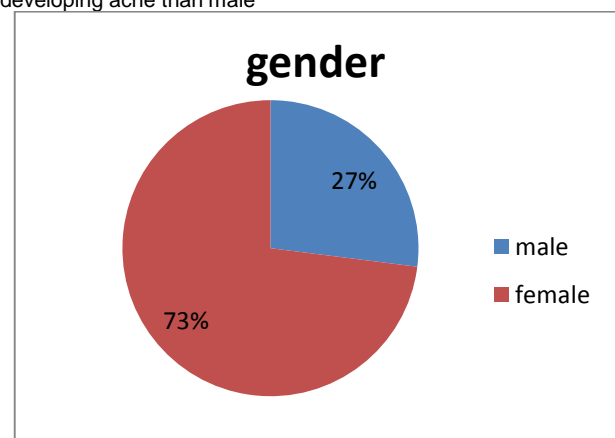
. Fig. 2: Out of 30 people studied 24(80%) have oily skin type, 3 people (10%) have normal skin type and 3 (10%) have dry skin type
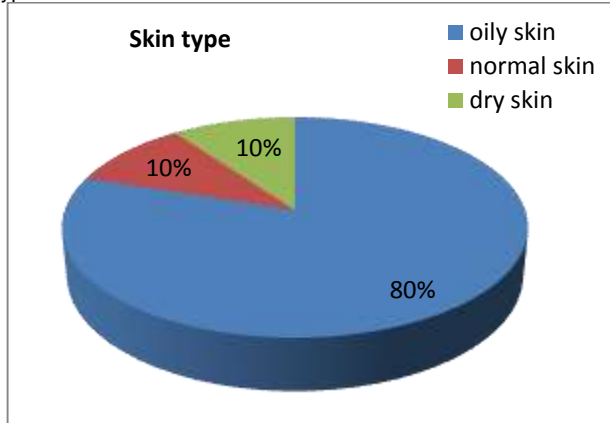
Skin type

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Fig. 3: Above figure shows that 53% people have stress as risk factor but 46% have no such risk factor
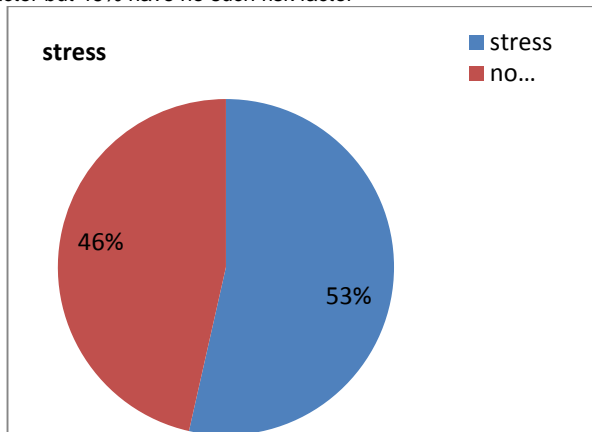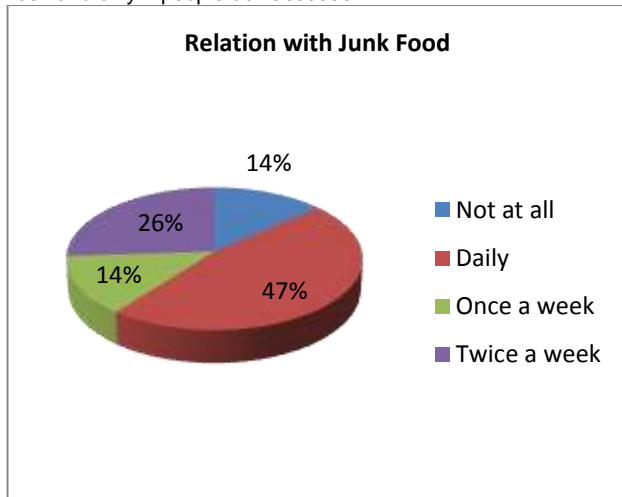
stress

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Fig. 4: Above figure shows that out of 30 people 14people eat junk food in daily basis, 8 out of 30 twice a week,4 out of 30 once a week and only 4 people don't eat at all.

Relation with Junk Food

DISCUSSION

Acne is chronic inflammatory disease of the pilosebaceous unit resulting from increased sebum production, altered keratinization, inflammation and bacterial colonization of hair follicles on the face, neck, chest and back. Local or systemic hormonal changes enhance secretion of sebum. The IL-1 and subnormal level of linoleic acid mediate follicular hyperkeratosis with inflammation leading to obstruction of sebaceous follicles9 this creates an excellent environment for the proliferation of popionibacterium acnes.Exactly what triggers acne and how treatment affects the course of the disease remains unclear. Other factors such as diet have been implicated, but not proven.[10] Eating fewer simple carbohydrates like sugar may help.11

Fig. 5: This figure shows that 7 out of 30 people have positive family history while rest of 23 have non-significant family history.

Family History
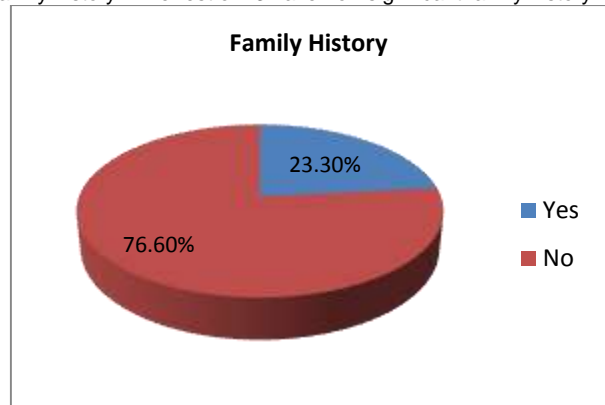
Worldwide studies on acne vulgaris suggest that acne occur most commonly during adolescence, affecting an estimated 80-90% of teenagers in western world[4]. The predisposition of specific individuals to acne is likely explained by a genetic component, which has been supported by twin studies as well as studies that have looked at rates of acne among first degree relatives[9]. While the connection between acne and stress has been debated, scientific research indicated that 'increased acne severity' is associated with increased stress level[11]. One trial found a relationship between acne and obesity[12].

According to our statistics increased sebum secretion is highly associated with acne prevalence as 80% of sample population claimed to have oily skin type. Use of cosmetics is also associated with increased prevalence of acne, 25 out of 30 i.e. 83.34% use cosmetics on regular basis. Acne is more prevalent in females than males (73.3% versus 26.6%) and 63.3% representative population have family history of acne vulgaris. The study showed that the onset of acne is more among unmarried as 70% were unmarried, it may be due to hormonal reasons, as it is believed that hormonal imbalance is one of major causes of acne.Stress is also one of the major factors, as 67% of sample mentioned increased severity of acne with stress

Shortage of time , more female patients in Outdoor Department of skin , uncooperative behavior of patients , stigma to talk with strangers were major limitations of our study and rates appear to be lower in rural societies.

CONCLUSION

As supported by the results ofour study, it can be concluded that significant risk factors of acne vulgaris included age, skin type, stress factors i.e. insufficient sleep, poor socioeconomic status, etc positive family history, parents' education, home type, overcrowding and cosmetic makeup use. Increased acne severity is linked with stress and it has a significant relationship to the use of carbonated or cola drinks, junk food and chocolate. . Prevalence of acne is more in urban dwellers; they have much more encounter with pollutants than rural habitants. People who have more junk and oily foods and less fresh fruits and vegetables in diet have more chances of acne.47% people consume oily food daily, and 40 % take fresh fruits only once a week while only 13% of people have acne who takes oily foods once a week or not at all and eat more fresh fruits. By Taking these risk factors in account we can help in reducing the incidence of acne among teenagers. We should also conduct seminars and arrange some healthy exercises to make people aware of risk factors associated with acne.

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