Original Article

Scarring in acne patients — A study done at Isra University Hyderabad

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Abstract

Objectives: To study the clinical presentation of acne in the Out Patient Department of Isra University Hospital.

Patients and Methods: A prospective study was done. The 100 patients with acne, who attended the Out Patient Department of Dermatology in Isra University Hospital, Hyderabad, from September 2007 to February 2008, were analyzed.

Results: In 100 patients with acne there were 65 female and 35 male patients. The patient ages ranged from 11 to 35 years, most being in the age range from 15 to 19 years (mean, 18.70 ± 4.50 years). Family history was positive in 49% of patients. Involvement of face was seen in 100% of patients. Scarring was observed in 59% patients. Premenstrual flare was seen in 70% female patients. Most patients, 83% had pruritus in lesions. Face (cheeks, forehead and lower part of the face) were the most common sites to be involved.

Conclusion: Acne is one of the common diseases, seen in the Out Patient Department, of Isra University Hospital. Study, concludes that female patients were more affected by acne and its complications like scarring as compared to the male patients (JPMA 59:525; 2009).

Introduction

Acne is the most common skin disease, affecting the vast majority of adolescents and young adults. It is one of the commonest dermatological problems encountered in Out Patient Clinics of Dermatology.[1,2] The reported prevalence of acne varies from 35 to over 90% of adolescents at some stage in their life. In some studies, the prevalence of comedones approaches 100% in both sexes during adolescence. The prevalence of acne varies between sexes and age groups, appearing earlier in females than in males, possibly reflecting the earlier onset of puberty. Acne commonly shows a premenstrual increase in women. Some studies, have detected seasonal variability in acne vulgaris, with the colder months associated with exacerbation and the warmer months showing improvement. Other studies, have not confirmed these findings. Several studies that have investigated the psychosocial impact of acne have had conflicting results. The prevalence of severe acne has decreased over the past 20 years due to improved treatment.[3-5]

Acne is not life-threatening, but markedly influences quality of life of the patient and constitutes a socioeconomic problem. The psychological effects can lead to problems like social withdrawal, lack of self confidence and sometimes even unemployment. Less than 15-30% of acne patients require medical treatment due to the severity of their clinical condition, and 2-7% of them experience life long post-acne scars. Acne scarring is caused by the body's inflammatory response to acne lesions. The best way to prevent scars is to treat acne early, and as long as necessary.[6-9]

From clinical experience acne appears to run in families, however, very few studies have investigated the genetic basis of this very common skin disease. A genetic background is also supported by a case control study by Goulden and colleagues.[10] They found that the risk of adult acne vulgaris in relatives of patients with acne as compared with control patients is significantly higher. Twin studies show that in homozygous twins, 97.9% of siblings develop the disease concomitantly in contrast to heterozygous twins. In a large twin study, with 458 homozygous and 1099 heterozygous twins 81% of the disease variance could be attributed to genetic causes and only 19% to environmental factors.[11]

Family physicians should be aware of compliance issues because lack of compliance is the most important cause of treatment failure. It can be minimized by patient education and the establishment of realistic treatment goals. The patient needs to know that the goal of treatment is to prevent new lesions and scarring.[12]

This study was undertaken to observe the clinical presentation of acne in the outpatients clinic of Isra University.

Patients and Methods

Patients attending the Out Patient Department of Dermatology, Isra University Hospital, Hyderabad, from September 2007 to February 2008 were subjected to a prospective descriptive study. All patients affected by Acne

were included. There was no exclusion criteria. Information regarding the age, sex, family history, distribution of lesions and duration of disease were asked from the patient and analysed. Those found to have facial acne were graded according to lesional count. Acne severity assessment was based on criteria defined by Lehmann et al.,[13] i.e. mild, < 20 comedones, or < 15 inflammatory lesions, or total lesion count < 30; moderate, 20-100 comedones, or 15-50 inflammatory lesions, or total lesion count 30-125; severe, > 5 cysts, or total comedone count > 100, or total inflammatory count > 50, or total lesion count > 125. This acne rating system was used as it enabled the investigators easily to classify grades of facial acne for a large sample size.

The data were evaluated in statistical programme SPSS version16. Descriptive statistics i.e. frequencies and percentages were calculated among the categorical parameters on 95% confidence interval.

Results

Hundred patients with Acne participated in the study of whom sixty five were females and thirty five males. The age of onset was between 11 and 35 years (most patients were in the age group between 15 and 19 years, mean age 18.7 ± 4.5 years) (Table-1). Family history of disease was positive for 36 (55%) female patients, 26 (40%) female patients had positive parental family history and 10 (15%) female patients had a positive siblings family history. Family history of disease was positive for 13 (37%) male patients, 10 (28%) male patients had positive parental family history and 3 (9%) male patients had positive siblings family history, two subjects denied to give their family history. Duration of acne of the respondents was for < 6 months in 26 patients (18 female and 8 male), and 23 patients reported a history of acne of between 6 months and 1 year (14 female and 9 male). Of those who reported a longer history of acne, 34 had a duration of 1-2 years (22 female and 12 male), and 17 patients reported a duration of > 2 years (11 female and 6 male).

Table-1: Age groups of patients.

Age group	Female patients (n=65)	Male patients (n=35)
11- 15 years	11	13
15- 19 years	20	10
19- 23 years	23	8
23- 27 years	6	3
27- 31 years	4	1
31- 35 years	1	0

The involvement of face was observed in 100 (100%) patients (sixty five female and thirty five males). Concomitant involvement of shoulders, chest and limbs along with face were seen in 45 patients (29 female and 16 males). Fifty nine patients had scars and hyperpigmented macules, 39 female (65%) and 20 males (57%), 5 (8%) female patients and 3 (5%) male patients had ice pick scars, 7 (12%) female and 4 (7%) males had box scars, 9 (15%) female and 4 (7%) males had rolling scars, 8 (14%) female and 5 (8%) males had keloidal scars and 10 (17%) female and 4 (7%) males had atrophic scars. Face was the commonest site to be involved, observed in 47 (80%) patients, (31 female and 16 male patients). The other site at onset, in order of frequency, were: Back in 9 (15%) patients, (6 female and 3 male patients) and chest in 3 (5%) patients, (2 female and 1 male patient). Active acne was seen in 37 (60%) female and 24 (68%) male patients, 26 (40%) female and 15 (43%) male patients had mild acne, 23 (35%) female and 13 (37%) male patients had moderate acne, 16 (25%) female and 7 (20%) male patients had severe acne (Table-2). Correlation with menses of the female respondents; 20 (30%) reported no correlation of acne flares to the menstrual cycle, while 29 (44%) reported occasional flares with menses and 17 (26%) reported a consistent correlation between acne flares and menses.

Table-2: Severity of acne according to lesion count.

Group of patients	Female patients (n=65)	Male patients (n=35)	Total patients (n=100)
Mild Acne (<20 Comedones, Total Lesion Count <30)	26	15	41
Moderate Acne (20-100Comedones Total Lesion Count 30- 125)	23	13	36
Severe Acne (>100 Comedones Total Lesion Count >125)	16	7	23

Twenty five (72%) male patients had acne before 18 years of age, and 47 (72%) female patients had acne before 20 years. Face was the commonest site to be involved in 100 (100%) patients, both sixty five females and thirty five males, had involvement especially of the cheeks, forehead and lower part of the face. Other sites at onset, in order of frequency, were: the limbs in 11 (11%) patients, 7 female and 4 male patients, chest in 20 (20%) patients, 13 female and 7 male patients, and shoulders in 5 (5%) patients, 3 female and 2 male patients. Eighty three patients had itching in the lesions (54 female (83%) and 29 male patients).

Discussion

Acne is one of the commonest dermatological problems encountered in Out Patient Department of Dermatology. Various studies on acne prevalence in adolescents show a frequency ranging from 30% to 100%, and have reported up to 91% of male and 79% of female teenagers being affected by acne.[9] However, there are few studies, on its prevalence among Asian teenagers. At the National Skin Centre in Singapore, acne is consistently among the top ten conditions for which patients seek treatment.[14,15] In 2002 there were 6805 new cases of acne vulgaris seen at the National Skin Centre of Singapore, accounting for 11.2% of the total number of new cases seen at the Centre in that year. There is evidence that acne vulgaris is highly prevalent and of concern in our population. However, locally, there have not been any community-based studies looking at the prevalence and severity of acne among teenage school students, or in their knowledge of the condition and its psychosocial impact.

A community-based epidemiological study of acne in Hong Kong showed that 52.2% of a randomized sample of 522 persons aged 15-25 years had acne.[3] In one study, researchers found that 50% of the adults with acne had a first degree relative parent, sibling and child who had acne. This suggests, that some people may have a genetic predisposition.[16]

The occurrence and incidence of scarring is still not well understood, however there is considerable variation in scarring between one person and another, indicating that some people are more prone to scarring than others. Scarring frequently results from severe inflammatory acne that occurs deep in the skin. But, scarring also may arise from more superficial inflamed lesions. The early detection and institution of appropriate treatment of acne is essential in the prevention of severe acne and scarring, and the consequent adverse psychosocial disabilities resulting from feelings of embarrassment, frustration and poor self-esteem.

This study confirms that acne is a common disease of teenagers seen in Out Patient Departments. In this study, a significant peak of incidence was observed between15 - 19 years. The authors chose the acne rating system proposed by Lehmann et al.[13] as it made it easy for us to classify severity of facial acne in a relatively large sample size using objective criteria. The disease, in our study runs a course of six months, leaving behind scars and minimal pigmentation in 65% of female patients and 57% of male patients, which is the usual course of this disease.[17]

Females were more affected by acne as compared to males, and also the female patients had more severe and scared acne. Permanent scarring and severity of disease can be prevented by early and proper management.

Conclusion

Acne is the one of the common disease, seen in our Out Patient Department. The Isra University Hospital based study may give an idea about the clinical presentation of acne in Out Patient Department of Dermatology. This study showed that female patients were more affected by acne and its complications like scarring as compared to male patients.

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