Different Aspects of Acne in Patients Attending the Department of Dermatology and Venereology at Rizgary Teaching Hospital in Erbil

Submitted in : 24/12/2009 Accepted in: 22/9/2010

Ala'a Abdulrahman Sulaiman* Intiha Mohamad Almousuly**

ABSTRACT

Background and Objectives: Acne is a common skin disease of adolescence. It is caused by inflammation of the pilosebaceous units, characterized by comedones, papules, pustules, inflamed nodules and it may result in scarring. This study was performed to define the different aspects of acne in patients attending the department of dermatology and venereology in Rizgary Teaching Hospital.

Methods: This study is a descriptive case- series hospital- based study, conducted on 200 patients with acne attending the department of dermatology and venereology in Rizgary Teaching Hospital in Erbil.

Results: The number of female patients with acne was 145 and male patients were 55. Acne of moderate severity was the commonest type, it was found in 57% and 64% of the patients had mixed types of lesions. Seborrhea was present in 84% of patients. Hirsutism was present in 44% of female patients and pre-menstrual flare-up was found in 73% of females. A significant relation was found between gender and degree of severity of acne. Also a significant relation was found between seborrhea and the acne severity.

Conclusions: This study showed that acne of moderate severity was the commonest type. Females made the majority of our acne patients. Multiple exacerbating factors were found to be contributing.

Key words: Acne, acne vulgaris, pilosebaceous units, comedones, seborrhea, hirsutism.

INTRODUCTION:

Acne is a chronic inflammatory disease of the pilosebaceous units. It appears in male and females who are near puberty and in most cases become less active as adolescence ends. The intensity and duration of activity varies for each individual. It is characterized by the formation of comedones, erythematous papules and pustules, and less frequently by nodules or pseudocysts and, in some cases, is accompanied by scarring [1, 2.] Although the basic cause of acne is unknown, acne is a multifactorial disease, developing in the sebaceous follicles [3.] Four major factors are involved in the pathogenesis of acne [1]:

2. An abnormality of the microbial flora
3. Cornification of the pilosebaceous duct
4. The initiation of inflammation

There are many factors that might help or aggravate acne [1]. A wealth of folklore has blamed acne on certain foods, in particular sweets and fatty foods, but scientific proof is lacking. About 70% of women complain of a flare 2-7 days premenstrualy [1]. Stress can induce acne. In addition, acne itself induces stress [4]. Acne occurs predominantly on the face and, to a lesser extent, occurs on the back and chest. In young men, it affects mainly the face, and in older males the back is also significantly affected. Seborrhoea is a frequent feature [1]. Acne is a continuous process and causes the eruption of new lesions over

* Assistant Lecturer M.B.Ch.B, H.D, Dermatology, College of Medicine, Hawler Medical University.
** Consultant Dermatologist (Lecturer) M.D,PhD, College of Medicine, Hawler Medical University.

Acne can be divided into inflammatory and non-inflammatory, and most patients have combinations of both [6]. In light-skinned patients, lesions often resolve with a reddish-purple macule that is short lived. In dark-skinned individuals, macular hyperpigmentation results and this may last several months. Acne scars are heterogeneous in appearance [7]. The choice of therapy is largely determined by the severity and extent of the disease, but should be tempered by patient choice and cost. Patient with mild acne usually receive topical therapy alone. Patients with moderate acne receive oral and topical therapies; patients with severe acne should immediately receive oral isotertinoin unless contraindicated [1].

MATERIALS AND METHODS:

Two hundred patients with acne were included in this case- series hospital-based study during the period between May 2006 and September 2006. The diagnosis was made on clinical basis. All ages and both sexes were included in the study. A detailed history was taken from each patient including name, age, sex, residency, occupation, age at onset of acne and family history. Exacerbating factors of acne were asked about including stress, diet, drugs, premenstrual exacerbation and others. Patients were also asked about seasonal variations, drugs used, systemic diseases, any associated conditions and the presence of psychological impact.

Each patient was examined for: The sites involved the types of acne lesions and skin character whether oily or dry. Female patients were examined also for hirsutism and androgenetic alopecia.

Grading of severity was done according to the following system [2]:

Severity	Papules\Pustules	Nodules
Mild	Comedonesonly\<20pustules	None
Moderate	>20pustules	Few
Severe	Extensive	Many

RESULT:

During the five month period of the study, the total number of patients attending the department of dermatology were counted and acne cases made 23% of the total patients seen .145 (72.5%) were females and 55 (27.5%) were males. Minimum age at onset for females was 9 years and maximum age was 28 years. Minimum age at onset for males was 12 years and maximum age was 23 years. Seborrhea was present in 82.1% of females and in 89.1% of males. 71.5% noticed that their acne was exacerbated by diets (oils, sweets, spices). Emotional factors as an exacerbating element were present in 42% of patients. Excessive sweating was claimed by 4% to exacerbate their acne. In females 8.3% claimed exacerbation after epilation and 2.8% after makeup use and 7.3% of males noticed exacerbation after shaving. Exacerbation of acne in summer had been noticed by 59.5% while 4% found their acne increased during winter where as 36.5% had no seasonal changes. The face was the commonest site involved by acne 99%, and then comes the back 58.5%, the shoulders 53.5%, and the chest 50.5%. Mild acne was found in 32.5%, 57% had moderate acne, and 10.5% had severe acne. The degree of severity of acne is shown in Table1. Family history was positive in 63.5% of patients. Psychological impact was present in 89% of females and 80% of males. In females different grades of hirsutism was found in 44.1% of patients with acne. Premenstrual flare-up was observed by 73.1% of females. A significant relation between seborrhea and the degree of severity was found, (Table 2). No significant relation between seborrhea and gender was found p-value 0.195. No significant relation was found between hirsutism and degree of severity p-value 0.252.A significant relation was found between gender of patients and degree of severity, the more severe acne was found among male patients, (Table 3).No significant relation was found

gender as shown in (Table 4)

Table1: The Frequency of the Degree of Severity of Acne

Severity	Frequency	Percent
Mild	65	32.5
Moderate	114	57.0
Severe	21	10.5
Total	200	100.0

Table 2: The Relation between Seborrhoea and the Degree of severity of Acne.

	Degree of Severity			Total	P-value
	Mild	Moderate	Severe		
Seborrhea positive	24.5%	94.5%	10%	84%	.044

Table 3: The Relation between Gender and the Degree of Severity of Acne

	Degree of Severity			Total	p-value
	Mild	Moderate	Severe		
Male	6.5%	15.5%	5.5%	27.5%	
Female	26%	41%	5%	72.5%	
Total	32.5%	57%	10.5%	100%	.015

Table 4: The Relation between Gender and the Type of Acne

	Gender		p-value
Types of acne lesions	male	female	
Inflammatory noninflammatory mixed	8% 4% 15.5%	14% 10% 48.5%	.295
Total	27.5%	72.5%	

DISCUSSION:

Acne cases made 23% of the total number of patients seen at the department of dermatology. The number of females was more than the males; this is not due to any difference in the incidence of acne among the two sexes but could be due to the fact that females tend to seek medical care more than males [8]. The age at onset was earlier in females (9 years) than in males (12 years) which may reflect the earlier , onset of puberty in females [1]. It is generally accepted that the severity of acne is correlated with facial sebum secretion [9]. In our study we found a significant relation between seborrhea and the degree of severity of acne. Acne presumed to be of multifactorial etiology, and our findings are compatible with this hypothesis as multiple factors were found to have some effect on the pathogenesis of acne vulgaris, for example emotional factors, excercise sweating, epilation, shaving and the use of

Foods do not worsen acne; however a balanced diet helps the immune system work to maintain resistance to the bacteria that contribute to acne and the elimination of certain foods from the diet will not control acne [10]. No significant relation between gender and the type of acne was found, but a significant relation was found between the degree of the severity and gender. The more severe acne was found in male patients. Family history was positive in 63.5% of our patients and negative in 36.5%, which is compatible with the fact that acne has a multifactorial genetic background. The psychological impact was higher among females probably explaining the higher number of female patients attending our department. Hirsutism was found to be associated with acne in 44% of female patients. In another Iraqi study hirsutism was a common association with acne vulgaris (59.6%), [11]. Melasma was found in 22% of females and 11.2% of males. This could be due to sunlight exposure, pregnancy, contraceptive pills and other factors [12]. Scarring was more common in male (29.1%) than females (13.8%). This is due to the fact that the more severe acne was found in males. Post inflammatory hyperpigmentation was present in 77.2% of our female patients and 47% of male patients, which are considered high and this could be related to the skin type. In another study post inflammatory hyperpigmentation occurred in 95% of acne patients [13].

REFERENCES:

1. Cun Liffe W. J, Simpson N.B. Disorders of the sebaceous glands. In Wilkinson DS, EblingFJD, Champion RH, Burton JL(eds). Text book Dermatology, 6th edithion. Black well scientific publication oxford, 2004; 43.15-73.
2. Habif T P. Acne , Rosacea , and Related Disorders. In: Clinical Dermatology, 4th edition, Mosby, Philadelphia. 2004; 162-194.
3. John S, Strauss, Diane M. Thiboutot. Diseases of the sebaceous glands. In: Freedberg I M, Eisen A Z, Wolff K, Austen K F, Goldsmith L A,Katz SI, Fitzpatrick TB (eds). Fitzpatrick's Dermatology in General Medicine, 5th edition,
4. Chin A, Chon SY,Kimball AB.The response of skin diseases to stress changes in the severity of acne vulgaris as affected by examination stress. Arch Dermatol 2003; 139:897-900.
5. Knutson DD. Ultrastructural observation in acne vulgaris: The normal sebaceous follicle and acne lesions. J Invest Dermatol 2000; 62:288.
6. Shalita, Bernard Ackerman. A review of the clinical features of acne. J of Drugs in Dermatology. 2003; 43: 131-38.
7. James WD, Berger TG, Elston DM. Acne. In: James WD, Berger TG, Elston DM (eds). Andrew's Diseases of the skin, clinical dermatology,10th edition. W. B. Saunders Company, Philadelphia. 2006; 231 - 45.
8. M. Golpour. The incidence of acne vulgaris in the schools of Sari. J of Mazandaran university of medical science.2006; 16:161-65.
9. S-W.Youn, E-S.Park, D-H, Lee,C-H.Huh.Does facial sebum excretion really affect the development of acne.Br J Dermatol 2005; 153:919-24.
10. Tan JK, Vasey K, Fung KY. Beliefs and perceptions of patients with acne. J Am Acad Dermatol. 2000; 44:439-45.
11. Khalifa E. Sharquie, Abd A.S, Gumar, Zeki R. Alkodsi. Acne vulgaris Epidemiology and grading. Saudi Medical Journal. 1991; 12(1):44-47.
12. Khalifa E Sharqui, samer A Dhahir. Melasma in Iraqi women: A clinical, histopathological and histochemical study. J Pan-Arab League Dermatol. 2000;11:111-13.
13. Sperling L C, Solomon A R, Whiting D A. Complications of acne vulgaris. Br J Dermatol. 1994; 130:259-60.