

Acne vulgaris in Iraq; new predisposing factors

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Abstract

Background: Acne is a common skin disorder that affects both adolescent and adult. However few studies on this condition have been done in Iraq.

Objectives: The purpose of this study to identify new precipitators and aggravators of acne.

Methods: We collected data using structured, self-administered questionnaire, among patients having acne vulgaris who were attending al-Hussain teaching Hospital, Dermatology and Venereology outpatient Clinic, in Thi-Qar, Iraq. A cross-sectional study was conducted.

Results: A total of 105 patients were included in this study (70female 35 male) the mean of

age \pm SD 19.78year \pm 5.155. , the mean of BMI \pm SD 24.97 \pm 5.28 (n=101). Where the history of oral herbal remedies or oral steroid as an appetite stimulant present in 22%, the history of applying topical cosmetic in 47% also 66.6% of patients consider the exposure to sun light exacerbate the acne vulgaris, the role of menses in female (n=70) are 44.2% in addition to 38% of sample consider the hair removal process by using thread and bleaching as aggravating factors.

Conclusions: Hair removal process, use of topical cosmetic products and oral herbal remedies or oral steroid intake has been positively related to acne vulgaris.

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Introduction

Acne vulgaris touches up to 85% of teenagers in the United Kingdom [1]. , the prevalence of acne vulgaris of the face among adolescent population was 67.5% [2].The clinical manifestations include comedones, seborrhea, pustules and papules, less often nodules, pseudocyst and ultimately scarring. There are four pathogenetic mechanisms for acne—high sebum productions, follicular occlusion, colonization by Propionibacterium acne (*P. acne*) and inflammation [3–6]. There were previous studies looking into the possible relation between, family history, Body Mass Index (BMI), stress, and diet with acne vulgaris

.the factors that exacerbate acne vulgaris have been carried out to support the hypothesis that what is taken orally or used topically may affect the skin. However, the findings of these studies are varying and so this study ask about the role of the topical drugs application, herbal remedies oral steroid intake, aesthetics habits , as well as the exposure to sunlight which may be an exacerbating factors of acne vulgaris. Evolution of our knowledge and comprehension the various precipitating factors of acne allow us to , customize treatment, individualize treatment and improved the quality of life for acne patients [7]

Material and Method

A cross-sectional study was conducted to assess the role of new predisposing factors of acne among patients with acne vulgaris who were attending al-Hussain teaching Hospital, Dermatology and Venereology outpatient Clinic, in Thi-Qar, Iraq. All patients presented with acne (both female and male) who came to outpatient dermatology clinic over the period from November 2012 to the end of December 2013 were included. We collected data using structured, self-administered questionnaire which was arranged after we reviewed the most recent literature and other questionnaires and according to the study objectives putting in consideration socio-cultural backgrounds. We divided the questionnaire into two parts. The

first part includes socio-demographic data like age, gender, and occupation. The second part includes questions to assess: (1) facts about causes and exacerbating factors like diet, stress, and obesity (2) facts about the use aesthetic creams or other herbal remedies which may use as appetite stimulant, and (3) the effects hair removal on acne. The patients were in clinics (female and male clinics). The questionnaires were given to the participants and clarified to them after getting a verbal consent from them. According to the results, some linguistic changes of questions were made to avoid confusion regarding questions and make comprehension and interpretation of questions simpler by participants. We calculated BMI by dividing the weight in

kilogram over the square of height in meter and categorize it based on WHO 2004 classification [11]. We entered and analyzed the data in a personal computer using statistical package for social sciences (SPSS) software version 16. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables and mean and standard deviation

(SD) for quantitative variables. Chi-square test was used as appropriate to determine association. The level of statistical significance was set to be less than 0.05. We obtained a verbal consent from the patients after clarifying the objectives of study to them. All questionnaires were anonymous, and data we collected were confidential and used only for the study purpose.

Results

In this study, 105 questionnaires were distributed, 105 acne patients completed the questionnaire. Males represented 33.4% of the sample and females were 66.6%. the mean of age \pm SD 19.78years \pm 5.155, the mean of BMI \pm SD 24.97 \pm 5.28. Also 30.5% present

with positive family history acne, in addition to 29% and 14% of patients are higher than normal body mass index and obese respectively, the occupation results housewife, student and does not work 41%,26.6 and 22% respectively.(see table1)

Exacerbating factors of acne among study sample

The role of tension present as a factor in 47%, the diet factor in 22%, the history of intake of herbal remedies as an appetite stimulant present in 22% in, the application of topical cosmetic in 47% also 66.6% of patients consider the exposure to sun light

exacerbate the acne vulgaris, the role of menses in female as exacerbating factor (n=70) are 44.2% in addition to 38% of sample consider the hair removal process by using thread as aggravating factors. (See table2).

Table 1- Characteristics of study population.

Variables	Number	%
Age 21years and below	75	71.4%*
Above than 21years	30	28.6%
Sex male	35	33.4*
Female	70	66.6
Family history (+)	32	30.5%
Family history (-)	73	69.5%
BMI below normal (n=101)	7	7%
Normal	51	50%
Above normal	29	29%
Obesity	14	14%
Occupation		
Housewife	43	41%*
Constructional work	4	3.8%
Student	28	26.6%
Does not work	23	22%
Employer	4	3.8%
Nurse	3	2.8%

*Statistical difference is significant P < 0.0001

Table 2 aggravating factors among acne patients.

Factors	Yes	%	No	%	Not sure	%
Diet	23	22%	82	78%	0	
Exposure to sun light	70	66.6%	35	33.4%	0	
Hair removal process	40	38%	64	61%	1	1%
Menses (n=70)	31	44.2%	39	55.8%	0	
Stress	50	47.6%	52	49.9%	3	2.5%
Using cosmetic	50	47.6%	55	52.4%	0	
Using herbal remedies or steroid	23	22%	82	78%	0	

Discussion

Cosmetic products were believed to aggravate acne rendering to 47.6% of the

sample which is parallel to Poli et al. study in which 58% of the respondents supposed that

cosmetics are aggravating their acne [8]. Oil-based cosmetics, pomades, and moisturizers may also encourage the appearance of acne.[18]. The exposure to halogenated compounds, animal fats, dioxin, or petroleum derivatives may cause “chloracne” or other acneiform lesions. [15][16]Forty-four percent of the sample supposed that menses aggravate acne, which is similar to Poli study results (55% thought that menses affect acne adversely) [8] and comparable to Stoll et al.study (44% of their sample had premenstrual exacerbation of their acne) [9]. Premenstrual exacerbations of acne are common. [17]Our study suggested that administration ofherbal remedies which has a significant positive relationship in 22% of patients with acne vulgaris, it is important to identify drug-induced acne, this because of herbal remedies contain different pharmacological component,and because treatment success depends on drug therapy modification or even withdrawal of this remedies [13]. Our study suggested that the role of diet in 22% of sample as an aggravator factor where in Poli et al. study chocolate and snacks were believed to aggravate acne by 62% and 45% of their sample, respectively [9]. In Al-Hoqail study 79% of acne of acne patients sample thought acne is associated to

diet. So dietary factors, particularly sweets, chocolate and fat, are frequently regarded by patients and clinicians as a cause or aggravator of acne [19,20] and our results agree with this hypothesis. Thirty percent of the sample said that they have a family history of acne vulgaris. These results were similar to other studies; for example, in Poli et al. study, 25.2% believed acne to be genetic origin from parents [8] Studies of sunlight exposure have found contradictory results; ultraviolet light may make sebum more comedogenic, but some of the visible wavelengths may reduce the follicular bacterial population,[12][14] Hot and humid conditions that stimulate sweating often worsen acne.[12] the role of sun exposure as an aggravating factor account for 66.6% of sample in our study. Our result found that stress aggravate acne in 47% of sample and this agrees with the evidence that does support the popular conception that psychological stress may promote exacerbations in predisposed patients. [12] Our results found the role of hair removal as aggravating factor in 38% of sample which agree with hypothesis of Mechanical skin irritation caused by headbands, hats, chin straps, backpacks, or shoulder pads may also induce acne mechanica [13].

Limitations

First due to the nature of the study design we used, this study was only able to reveal the association, but not the cause and the effect of such factors on acne vulgaris. Second other

confounders such as inadequate sleep, smoking, alcohol consumption and facial hygiene care should also been taken into account in future studies.

Recommendations

More work for health education in general and selective patient education especially about the application of topical cosmetics, intake of herbal remedies or oral steroid and their side effect, are needed to improve patients' knowledge and raise their awareness.

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العد الشائع في العراق؛ العوامل المؤثرة الجديدة

الدكتور علاء عبد الحسن نايف*، ماجستير الأمراض الجلدية والدكتور عدنان طعان ثامر دكتوراه في الأمراض الباطنية* والصيدلي بسام عبد الصاحب حسن، ماجستير أدوية**

الخلاصة:

العد الشائع (حب الشباب) هو مرض جلدي شائع يؤثر على حد سواء بالمراهقين والبالغين. وقد أجريت دراسات قليلة ومحدودة عليه في العراق. الغرض من هذه الدراسة هو تحديد مسببات جديدة وعوامل مشددة للعد الشائع. تم جمع البيانات باستخدام منظم، الاستبيان ذاتياً، بين مرضى حب الشباب الذين يحضرون مستشفى الحسين التعليمي عيادة الأمراض الجلدية والتناسلية في ذي قار، العراق. وقد أجريت دراسة مستعرضة شارك في هذه الدراسة ما مجموعه ١٠٥ مريضاً (عدد الذكور ٣٥ وعدد الإناث ٧٠) ومتوسط العمر للمجموعة ١٩.٧٨ سنة ± 5.155 . حيث كان تناول العلاجات العشبية بمثابة منبه الشهية كعامل مؤثر موجودة في ٢٢٪، واستخدام مستحضرات التجميل الموضعية كعامل مؤثر موجودة في ٤٧٪ بالإضافة إلى ٦٦.٦٪ من المرضى اعتبروا ان التعرض لأشعة الشمس يؤدي إلى تفاقم العد الشائع، وكان دور الحيض في الإناث كعامل مؤثر موجودة في ٤٤.٢٪ بالإضافة إلى ٣٨٪ من المجموعة أظهرت حدوث تفاقم في حب الشباب بعد عملية إزالة الشعر باستخدام الخيط والتشقيير. أظهرت الدراسة ان عملية إزالة الشعر، واستخدام مستحضرات التجميل الموضعية وتناول العلاجات العشبية او الستيرويدات هي عوامل مؤثره في العد الشائع.

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