

Chronic Scalp Folliculitis versus Acne Vulgaris (Observational Case Series Study)

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Abstract

Background: Acne vulgaris is a chronic inflammatory disease of pilosebaceous units, of adolescents, and more likely to be associated with chronic scalp folliculitis.

Objective: To assess the association between chronic scalp folliculitis with acne vulgaris and vice versa in Iraqi patients.

Patients and methods: This observational case series study was done in Department of Dermatology- Baghdad Teaching Hospital from March 2009-July 2010. Two groups of patients were included: the first group (39) patients with chronic scalp folliculitis. Full history and examination were done for each patient. Also, careful history was taken from each patient recording the association with acne vulgaris. The second group consisted of 282 patients with acne vulgaris. Detailed history and examination of all patients were performed concerning the association with chronic scalp folliculitis.

Results: In the first group, the age of patients ranged from 16-33 years with a mean \pm SD of 24.1 ± 5.4 years. Acne vulgaris was found in 28 (71.7%) patients. In the second group, the age of patients ranged from 13-32 with a mean \pm SD of 21.5 ± 4.8 years. Chronic folliculitis of the scalp was found in 24 (8.5%) patients.

Conclusions: Chronic folliculitis of the scalp and acne vulgaris was closely associated and might share the same etiopathogenic factors.

Keywords: Acne vulgaris; Chronic scalp folliculitis

Introduction

Folliculitis is a condition in which the inflammatory changes are confined to the ostium of a hair follicle or extend below it [1]. Chronic folliculitis is a common condition seen among adult more in males than females. Many causes have been attributed to the cause of this problem most commonly: bacterial [2] like *staphylococcus aureus* and *pseudomonas*; fungal like *dermatophytic* and *pityrosporum* folliculate [3] and viral like *mulloscum contangiosum* and *herpes simplex* [4]. Acne vulgaris is a chronic inflammatory disease of pilosebaceous units which is characterized by the formation of comedons, erythematous papules and pustules on the face, neck, upper trunk, and upper arm. It occurs primarily in the oily (seborrheic) areas of the skin [5,6]. The pathogenesis of acne is multi-faceted involved in sebaceous gland development and how its mutation leads to acne is unknown, the following factors are the main stones in the aetiopathogenesis of acne: Follicular epidermal hyperproliferation results in the formation of the primary lesion of acne, the microcomedon [7]. Excess sebum production, patients with acne produce more sebum than those without acne [8]. Inflammation, biopsies of newly formed comedons demonstrate even greater role of inflammation [9]. *Propionibacterium acnes* and other bacteria, *P. acnes* plays an active in the process of inflammation. *P. acnes* are a gram-positive, anaerobic and microaerobic bacterium found in the sebaceous follicle [10]. The types of lesions in acne are: retentional lesions consists of black heads, white heads [11] and intermediate non-inflamed lesion; transition forms can be observed between comedons and the inflammatory lesions and inflammatory lesions which include papules, pustules, nodules and cystic lesions [12]. From the routine daily clinical practice which came across of many cases of chronic folliculitis that are associated with active acne vulgaris and both respond to the same therapy which is the anti-acne treatment. So, the aim of the present

work is to assess the association of chronic scalp folliculitis with acne vulgaris and vice versa in Iraqi patients.

Patients and Methods

This is an observational case series study and it was carried out in the Department of Dermatology, Baghdad Teaching Hospital from March 2009 to July 2010. Two groups of patients were included in this study. The first group included 39 patients with chronic scalp folliculitis where the diagnosis was established by clinical means. All patients were fully interviewed and full history was taken regarding the following points: age, sex, and time of onset, duration of the disease and the site of the lesions. Physical examination was done including the clinical appearance of the folliculitis and site of the lesions. All lesions characterized by pustules and papules pierced by hairs. Also detailed history and examination were performed serially for association with acne vulgaris in the same patient. The exclusion criteria included: less than 2 months history of chronic scalp folliculitis; patients on immunosuppressant drugs like corticosteroids and cytotoxic; immunosuppressant conditions like diabetes mellitus and malignancy

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and children. The second group consisted of 282 patients with acne vulgaris where the diagnosis was established by clinical methods. Full history and examination of acne lesions were carried out regarding the age of onset, severity and duration. Detailed history was taken concerning the association with chronic scalp folliculitis. Biopsy was not carried out as the diagnosis of acne vulgaris and chronic scalp folliculitis was clear depending on clinical base.

Formal consent was taken from each patient and the ethical approval was obtained from the Scientific Council of Dermatology and Venereology-Arab Board for Medical Specializations, before taking swabs and full explanations for them about the nature and course of the disease.

Grading of acne was done as the following [10].

- 1) Mild acne in which the count of pustules is less than 20 pustules and the count of papules is less than 10.
- 2) Moderate acne in which the count of pustules is ranging between 20-40 pustules and the count of papules are ranging between 10-30 papules.
- 3) Severe acne in which the count of pustules is more than 40 pustules and the count of papules is more than 30.

Results

In the first group a total of 39 patients with chronic recurrent scalp folliculitis were seen. The age of patients ranged from 16-33 years with a mean \pm SD of 24.1 ± 5.4 years, 27(69.2%) males and 12 (30.7%) females with male to female ratio 2.2:1. Duration of the condition was ranged from 2 months to 5 years with a median 2 years. Acne vulgaris was found in 28 (71.7%) patients, 18 (64.2%) were males and 10 (35.7%) females. The type of acne was: mild in 13 (46.4%) patients, moderate 9 (32.1%) and severe 6 (21.4%). In 7 (17.9%) patients the age of onset of chronic folliculitis was between 10-19 years, 24 (61.5%) between 20-29 years and while in 8 (20.5%) between 30-39 years. In all patients there was no family history of same problem.

The second group consisted of 282 patients with acne vulgaris. The age of patients ranged from 13-32 years with mean \pm SD of 21.5 ± 4.8 years; 166 (58.8%) males and 116 (41.2%) females with a male to female ratio of 1.4:1. The age of onset of acne vulgaris between 10-19 years in 108 (38.2%) patients, between 20-29 years in 145 (51.4%) and between 30-39 years in 29 (10.2%). Chronic folliculitis of the scalp was found in 24 (8.5%) patients. The type of acne in patients who had chronic folliculitis was: mild in 9 (37.5%) patients, moderate in 7 (29.1%) and severe in 8 (33.3%).

Discussion

Acne vulgaris is a common dermatological problem that could extend to involve many parts of the body like neck, buttock, back and might even involve the scalp [1,2]. Chronic folliculitis are common problems among adult people with many causes been discussed like bacterial, most commonly due to *S. aureus*; fungal and viral [1]. In Iraq, we often observe cases of chronic folliculitis that are commonly associated with acne vulgaris and vice versa and often therapy of both conditions are the same using antiacne therapy. So, the present work was carried out to evaluate the problem of chronic folliculitis among adult Iraqi patients. The result of this study showed that chronic folliculitis of the scalp are associated with acne vulgaris in 71.7% patients while patients with acne vulgaris presented with chronic scalp folliculitis in 8.5% cases. Accordingly from these results we can

speculate that the etiopathogenesis of chronic scalp folliculitis and acne vulgaris could be similar according to the following observations: first, the two conditions are closely associated with each other, secondly both diseases occur in the same age group, thirdly both diseases respond to the same therapy. This study for the first time showed this close association between these two conditions and unfortunately there is no record in medical literatures demonstrating this marked connection and elucidating the etiology of the diseases that could be related to one entity. These will facilitate the easy diagnosis and treatment for practicing dermatologists.

Conclusion

In conclusion, chronic folliculitis of the scalp and acne vulgaris was closely associated and could share the same etiopathogenesis and might be related to one entity. Further studies including microbiological assessment is strongly recommended to confirm this association between these conditions.

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