Post Hair Epilation Acneiform Eruption Among Females

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ABSTRACT:

BACKGROUND:

Acneiform eruptions are common and important variants of acne vulgaris, there are many examples of acneiform eruptions like steroid acne and pityrosporum folliculitis.

OBJECTIVE:

To evaluate the acneiform eruption that follows hair epilation.

PATIENTS AND METHODS:

This case-series study was conducted in Department of Dermatology and Venereology, Baghdad Teaching Hospital during the period from January 2005 through July 2006. Forty females were included in this work, history was taken from each patient and all were clinically examined regarding all relevant points to this condition. Swabs and cultures from rash were carried out on 11 patients using blood, chocolate, and McConky agar as culture media.

RESULTS:

The ages of patients ranged from14-40 years with a mean ± SD of 20.85 ± 5.52 years. History of acne vulgaris was positive in 32 (80%) patients, and it was mild acne, resolved before the onset of hair epilation acne. Method of hair epilation was threading and sugaring.The time interval between hair epilation and rash appearance was 1-21 days with a mean ± SD of 4.48 ± 3.36 days. Itching was the commonest symptom complained by 18(45%) patients.The lesions morphology was mainly monomorphous erythematous papules surmounted by tiny pustules. Swabs and cultures revealed no pathogenic bacteria.

CONCLUSION:

Hair epilation by threading and sugaring is a common cause of monomorphous acneiform eruption and might be an important triggering and exacerbating factor for acne vulgaris in Iraqi females.

KEYWORDS: hair epilation, acneiform eruption.

INTRODUCTION:

Many men and women choose to remove unwanted body hair for cosmetic, social, cultural, or medical reasons. Many methods are available for temporary or permanent hair removal such as: Depilatory creams [(1)], eflornithine hydrochloride (VANIQA cream 13.9 %), [(2)] laser-assisted hair removal and electrolysis. [(3)]

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Folliculitis could be acute or chronic which is a common problem in dermatological practice, could be localized to the beard, scalp or other hair bearing areas and the commonest bacterial involvement in its pathogenesis is staph aureus.[(4)] Also, folliculitis might be induced by chemical or mechanical factors such as poly halogenated hydrocarbons or post epilation folliculitis.[(5)]

Complications of hair removal may include: folliculitis, pseudofo-lliculitis barbae, post inflammatory hyperpigmentation and others. [(6)]

Acneiform eruptions consist of, papulopustules, cysts, nodules or comedones. These eruptions results from a wide variety of diseases, including infections (e.g. pityrosporum folliculitis), growth anomalies (e.g. nevus comedonicus), and drug reactions (e.g. steroid acne), these eruptions are not necessarily confined to the usual sites of

acne vulgaris. They are distinguished by their sudden onset, usually in a patient well past adolescent age. [7, 8]

Hair epilation is an important cause of acneiform rash, and this condition is not mentioned before in literatures, therefore this study is carried out to describe and evaluate this common problem among Iraqi females.

PATIENTS AND METHODS:

This case- series study was done in Department of Dermatology and Venereology, Baghdad Teaching Hospital, in the period from January 2005 through July 2006.

Forty females with history of hair epilation were enrolled in this study; all patients complained of rash that appeared for the first time after hair epilation, many patients practiced hair epilation before with no such problem.

Complete history was taken from all of them regarding: age, marital status, history of acne vulgaris, method of hair epilation, time interval between hair epilation and appearance of the rash, symptoms and rash distribution. Patients were also clinically examined for the morphology of lesions and their distribution.

Swabs and cultures were carried out on eleven patients; lesions were cleansed with 70% ethanol, then after 5 minutes the pustular wall was removed by a sterile needle and the pustular contents were swabbed.

Swabs were taken from either face; upper arms; or upper back and cultured on blood, chocolate and MacConky agar and examined after 48 hours.

Formal consent was taken from each patient after full explanation about the goal and nature of the present study. Also, ethical approval was performed by the Scientific Council of Dermatology and Venereology-Iraqi Board for Medical Specializations.

Photographs were taken by Digital Camera Sony (Cyper shot) 4.1 mega pixels.

RESULTS:

Forty females were enrolled in this work, all of them complained of An eruption which followed hair epilation, their ages ranged between 14-40 years with a mean ± SD of 20.85 ± 5.52 years. Twenty (50%) patients were married and 20 (50%) were single.

History of acne vulgaris was positive in 32 (80%) patients, in most of them was mild and disappeared spontaneously, or with a short term ther- apy before the onset of post hair epilation eruption, the remaining 8(20%) patients denied any history of acne vulgaris.

Method of hair epilation was threading in 27 (67.5%), sugaring in 7 (17.5%), while both threading and sugaring were practiced by 6(15%) patients. The time interval between hair epilation and the appearance of the acneiform rash was 1-21 days with a mean ± SD of 4.48 ± 3.36 days.

Eighteen (45%) patients complained of itching, 10 (25%) had burning sensation; 2 (5%) had both itching and burning; 4 (10%) patients had psychological upset, while 6 (15%) had no associated symptoms.

The rash distribution was on the face alone in 23 (57.5%), upper arms alone in 2 (5%) patients, while in the remaining 15 (37.5%) patients, the rash was distributed on face, neck, shoulders, cheeks, upper arms, and upper back. The morphology of lesions was mainly monomorphous erythematous papules surmounted by tiny pustules, this picture was seen in 35 (87.5%) patients, papules and pustules with few black heads come- dones were observed in 4 (10%) , while 1 (2.5%) patient showed hyperpigmented macules in addition to the papulopustular rash.

Swabs and cultures from 11 patients showed no pathogenic bacteria; while ***Staph. epidermidis*** was isolated only in one case.

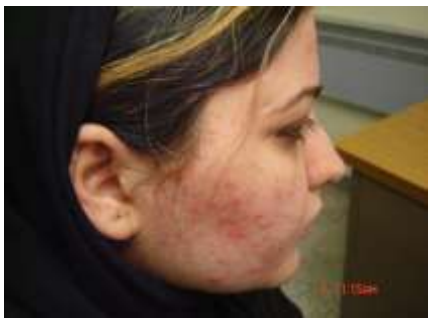

Figure 1: Hair epilation acneiform rash consisting of erythematous papules surmounted by tiny pustules on cheeks.

DISCUSSION:

Although acne vulgaris is a common skin disease, there are many other skin problems that might simulate acne vulgaris, so called acneiform eruptions, like steroid acneiform rash, pityrosporum folliculitis, and drug induced acneiform rash, Behçet's disease. Even though hair epilation is a common manoeuvre that is practiced by most females and many males and often followed by acneiform rash, surprisingly it was not reported before in the medical literatures.

The present work showed that the most commonly used hair epilation methods were threading and sugaring.

The time needed for rash to appear was about 4 days; the typical site was face alone (57.5%); although other sites could be affected.

The rash was typically monomorphous papular lesions surmounted by tiny pustules. This is most probably apart of trauma rather than acne. It usually resolves spontaneously leaving postinflammatory pigmentation.

The pathogenesis of hair epilation acneiform rash cannot be fully explained but we can speculate that hair traction might induce local injury of hair follicle followed by cytokines release from keratinocytes like inte- rleukin 1α, 6, 8 and tumour necrosis factor α that induce inflammatory reaction followed by rash. [(9)]

The microbial theory might be excluded as the present work showed no relevant pathogenic bacteria on culture.

Systemic and topical steroids can produce a similar acneiform rash; however the mechanism is probably different. [(10, 11)]

Post epilation acneiform rash is usually a self limiting disease, but when it occurs in young people, usually triggers and exacerbates acne vulgaris and this overtime might change into acne reaching its advanced stage by acne vulgaris.

So, hair epilation is one of the most important triggering exacerbating factors of acne vulgaris in Iraqi individuals (Sharquie 2006 personal observations).

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