Libyan International Medical University
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The Relationship Of Diet And Acne

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Abstract

Nutrition and diet are affecting overall health;. But can diet affect acne? In the report a collecting data from different three sources were taken. The first study demonstrated a positive association between milk intake and acne. The second study reported an association between high-glycemic diet and acne. The third study included the relation between fat intake and acne.

Introduction

Acne is one of the most common dermatological conditions, affecting millions of young adult worldwide.[1] It is a disorder of pilosebaceous units. It can be considered as a chronic disease in view of the most recent definitions of chronicity by the World Health Organization. It is generally accepted that excess sebum, hormones, bacteria and hyper proliferation of follicular cells are the major etiologic factors for acne.[2] On the one hand, recent studies have suggested a rather close relationship between diet and acne.[3,4]

Discussion

In this report data from three different studies have been gathered to see if there is a relationship between diet and acne

First study: - linked acne to the consumption of milk. The investigators raised also the point that the majority of the milk and dairy products consumed in the United States come from pregnant cows. Could these products be responsible for acne since milk exposes us to the hormones that cows produce when they are pregnant? Given also the fact that hormones clearly play a role in acne; as sebum production may be influenced by androgens and hormonal mediators, such as sex hormone binding globulin (SHBG) and insulinlike growth factor-I (IGF-I), all of which may be influenced by dietary factors. **Results:** a group of 47,355 women who were asked to remember what they ate in high school, years prior to the study. Another later study asked teenage boys to recall what they ate and to self-determine the severity of their acne**.**[5,6]

However these studies had limitations because the questionnaire required self-assessment of acne and was based on memory of food intake. This can be difficult and subjective since recalling what one ate days ago can be difficult. Also an association between drinking milk and acne means that more validated and well-designed studies are needed to prove if there is an association or a cause.[5,6]

Second study:- reported an association between high-glycemic diet and acne. The investigators reported that foods with a high-glycemic index may contribute to acne by elevating serum insulin concentrations (which may stimulate sebocyte proliferation and sebum production), suppress SHBG concentrations, and raise androgen concentrations. On the contrary, low-glycemic-index foods increased SHBG and reduced androgen levels; this is important since higher SHBG levels were associated with lower acne severity.[7]

Results. Randomly assigned participants (n = 43, all male, 15–25 years old) were enrolled to the dietary intervention or to the control group and were followed for 12 weeks. Blinded dermatologists assessed the number of acne lesions every four weeks, starting at baseline. Participants on the low-glycemic-load diet experienced greater reductions in total lesion counts and inflammatory lesions compared to those on the control diet.[7]

Third study:- included the relation between fat intake and acne. **Results.** 871, 10–11-year-old girls followed prospectively for 5 years found that those with severe (vs. mild or moderate) comedonal acne had significantly higher androgen levels and significantly earlier menarche. Although diets high in saturated fat increase the concentration of IGF-1, low-fat, high-fiber diets tend to decrease the concentrations of IGF-1 and androgens, and increase the concentration of SHBG.[8,9,10]

Conclusion

evidence suggests that components of diets, particularly dairy products, may be associated with acne. The hormonal effects of dietary components, such as glycemic index levels or fat or fiber intake, may mediate the effect of diet on acne risk. Until 2005, cross-sectional, case–control, cohort, and clinical intervention studies designed to address the relationship between diet and acne typically failed to incorporate adequate controls, objective measures, and appropriate statistical analyses. Well-designed prospective studies published since 2005 have elucidated the mechanisms whereby particular foods and dietary constituents may influence acne risk and severity. In order to test the efficacy of dietary interventions, prospective, randomized trials, including controls for environmental stressors, acne medications, age, pubertal stage, and age at menarche, are essential.

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