Frequency of Polycystic Ovarian Syndrome in Women with Post-Adolescent Acne

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Abstract

Background: Acne vulgaris in females may appear for the first time at or persist after the age of 25 years and may be resistant to treatment despite topical and systemic therapy for a sufficient period. In this condition, acne may be a manifestation of an underlying endocrine condition such as polycystic ovarian syndrome (PCOS).

Objective: The aim of this study was to assess the frequency of PCOS in women with post-adolescent acne.

Patients and methods: This case–control study included 40 female patients with post-adolescent acne vulgaris and 20 acne-free female participants as a control group. Both patients and controls were subjected to full assessment of history, dermatological examination, and assay of serum total testosterone, follicle-stimulating hormone (FSH), and luteinizing hormone (LH). Two of the following criteria were required for the diagnosis of PCOS: a clinical or a biochemical feature of hyperandrogenism and/or ratio of LH to FSH of at least 2 and/or ultrasonic findings of PCOS.

Results: This study showed that the frequency of PCOS among post-adolescent acne patients was 37.5 and 5% in the control group, with a statistically significant difference ($P = 0.006$). There was no statistically significant difference between the acne group and the control group regarding serum levels of total testosterone, FSH, and LH ($P = 0.23, 0.14,$ and $0.86,$ respectively). However, statistically significant difference was found between both groups in the LH/FSH ratio ($P = 0.033$). Also, there was a highly statistically significant difference between acne patients with PCOS and those without PCOS in the LH/FSH ratio and LH ($P<0.001$ for both).

Conclusion: All women with post-adolescent acne should be considered for underlying PCOS. Hormonal profile and ultrasonography should be performed for patients with post-adolescent acne despite the absence of menstrual irregularities or hirsutism.
Acne vulgaris in females may appear for the first time at or persist after the age of 25 years and may be resistant to treatment despite topical and systemic therapy for a sufficient period. In this condition, acne may be a manifestation of an underlying endocrine condition such as polycystic ovarian syndrome (PCOS). The aim of this study was to assess the frequency of PCOS in women with post-adolescent acne. This case–control study included 40 female patients with post-adolescent acne vulgaris and 20 acne-free female participants as a control group. Both patients and controls were subjected to full assessment of history, dermatological examination, and assay of serum total testosterone, follicle-stimulating hormone (FSH), and luteinizing hormone (LH). Two of the following criteria were required for the diagnosis of PCOS: a clinical or a biochemical feature of hyperandrogenism and/or a ratio of LH to FSH of at least 2 and/or ultrasonic findings of PCOS. This study showed that the frequency of PCOS among post-adolescent acne patients was 37.5 and 5% in the control group, with a statistically significant difference ($P = 0.006$). There was no statistically significant difference between the acne group and the control group regarding serum levels of total testosterone, FSH, and LH ($P = 0.23$, 0.14, and 0.86, respectively). However, statistically significant difference was found between both groups in the LH/FSH ratio ($P = 0.033$). Also, there was a highly statistically significant difference between acne patients with PCOS and those without PCOS in the LH/FSH ratio and LH ($P<0.001$ for both). All women with post-adolescent acne should be considered for underlying PCOS. Hormonal profile and ultrasonography should be performed for patients with post-adolescent acne despite the absence of menstrual irregularities or hirsutism. Acne vulgaris in females may appear for the first time at or persist after the age of 25 years and may be resistant to treatment despite topical and systemic therapy for a sufficient period. In this condition, acne may be a manifestation of an underlying endocrine condition such as polycystic ovarian syndrome (PCOS). The aim of this study was to assess the frequency of PCOS in women with post-adolescent acne. This case–control study included 40 female patients with post-adolescent acne vulgaris and 20 acne-free female participants as a control group. Both patients and controls were subjected to full assessment of history, dermatological examination, and assay of serum total testosterone, follicle-stimulating hormone (FSH), and luteinizing hormone (LH). All women with post-adolescent acne should be considered for underlying PCOS. Hormonal profile and ultrasonography should be performed for patients with post-adolescent acne despite the absence of menstrual irregularities or hirsutism.