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A case of Acne Vulgaris in 23 years old female patient

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Abstract

Acne vulgaris is a disease of the pilosebaceous unit that causes open and closed comedones, inflammatory lesions (papules, pustules, and nodules), and varying degrees of scarring. We recorded a case of Acne Vulgaris in 23 years old female patient.

Keywords: Acne Vulgaris, pilosebaceous.

Introduction

Acne vulgaris (AV) is a disease of the pilosebaceous unit that causes non-inflammatory lesions (open and closed comedones), inflammatory lesions (papules, pustules, and nodules), and varying degrees of scarring ^[1]. AV is an extremely common condition with a lifetime prevalence of approximately 85% and occurs mostly during adolescence. AV can persist into adulthood, with a 50.9% prevalence rate of acne in women ages 20 to 29 years versus 26.3% in women ages 40 to 49 years. Female patients account for two thirds of visits made to dermatologists for acne, and one third of all dermatology office visits for acne are by women who are older than 25 years ^[2].

Pathogenesis of the disease consists of microbial colonization of pilosebaceous units with *Propionibacterium* acnes, hyperkeratinization and obstruction of sebaceous follicles as a result of abnormal keratinization of the infundibular epithelium and subsequent perifollicular inflammation. One of the most important pathogenetic factors is the androgenic stimulation of sebaceous glands. Significant number of female patients aged over 25 years with acne has shown in the recent epidemiologic studies ^[3].

The pathogenesis of acne in adult women is particularly complex. Androgens play a major role, as evidenced by the response of acne in adult women to hormonal treatments, especially in the context of hyperandrogenism disorders such as polycystic ovary syndrome (PCOS) and the use of hormone-based therapies such as oral contraceptive and antiandrogen medications in women with normal androgen levels ^[4]. We recorded a case of Acne Vulgaris in 23 years old female patient.

Case Report

A 22-years-old female patient visited to department of Dermatology with chief complaint of acne vulgaris since 6 years. She complained from painful acneiform eruptions, affecting mainly the middle and lower third of face.

Medical history found to be non- significant. General physical examination revealed that patient was healthy and her menstruation was normal. None of her family members had similar complaint. Patient visited dermatologist and was treated with topical antibiotics and sunscreens with no improvement was found. At the time, a gynecological examination revealed hormonal abnormalities and a six-month therapy with Carbegoline 0.5 mg/daily was given.

Laboratory examinations showed results from hematological, biochemistry and urine analysis within normal ranges. Hormonal evaluation showed elevated levels of total testosterone (0.84 ng/ml) and prolactin (48.12 ng/ml). Topical treatment with Clindamycin phosphate 10 mg/g and Tretinoin 0.25 mg/g gel once a day was administered. Systemic therapy with Bromokriptin mesylate 2.5 mg and Ethiny 1 estradiol 0.03 mg/Drosiprenon 3 mg per day was recommended by the gynecologist. The prognosis of the patient was good.

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Discussion

Adult onset acne (AOA) is defined as a chronic inflammatory disease of the pilosebaceous units, occurring at the age over 25 years. It commonly affects females between the age of 25 and 50 years and is clinically presented with comedones, papules, pustules, cysts, and nodules on the lower part of the face, chin and jaw line ^[5].

Acne lesions range from comedones to papules and pustules, cysts, and/or nodules. Ramos-e-Silva *et al.* ^[6] in their study found that 85% of patients had mostly comedonal acne with two subtypes identified as persistent and late-onset acne. Persistent acne, which is defined as acne that persists beyond adolescence into adulthood, accounts for 80% of cases in adult female patients. Late-onset acne is defined as acne that begins after the age of 25 years. Women with signs of hyperandrogenism such as hirsutism or menstrual irregularities and those with true late-onset acne should be further evaluated for an underlying endocrine disorder such as PCOS. We recorded a case of Acne Vulgaris in 23 years old female patient.

Yordanova *et al.* ^[7] presented a case-report of a 25-year-old female patient with moderate persistent AOA accompanied by hyperandrogenemia and hyperprolactinemia. After six-month systemic therapy with Bromokriptin mesylate, Ethinyl estradiol and Drospironon combined with retinoid and antibiotic topical therapy, a satisfactory result was reported.

The diagnosis of acne vulgaris is primarily clinical. History and physical examination can help determine if there is an underlying cause of the acne, such as an exacerbating medication or endocrinologic abnormality causing hyperandrogenism (e.g., polycystic ovarian syndrome) ^[8]. Other dermatologic manifestations of androgen excess include seborrhea, hirsutism and androgenetic alopecia. Endocrinologic testing is not ordered routinely for women with regular menstrual cycles. Older women, especially those with new-onset acne and other signs of androgen excess (e.g., hirsutism, androgenic alopecia, menstrual irregularities, infertility), should be tested for androgen excess with measurements of total and free serum testosterone, dihydroepiandrosterone, and luteinizing and follicle-stimulating hormone levels ^[5]. Pelvic ultrasonography may show the presence of polycystic ovaries ^[5]. In prepubertal children with acne, signs of hyperandrogenism include early-onset accelerated growth, pubic or axillary hair, body odour, genital maturation and advanced bone age ^[9].

Combination therapy, for example with retinoids and antibiotics, is more effective than either agent used alone. However, the agents should be applied at separate times, unless they are known to be compatible. Benzoyl peroxide may oxidize a retinoid such as tretinoin if it is applied simultaneously. If inflammatory lesions are present, topical antibiotics containing benzoyl peroxide should be combined with a topical retinoid (e.g., topical antibiotic with benzoyl peroxide in the morning and retinoid at night) ^[10].

Conclusion

Authors found that Bromokriptin mesylate, Ethinyl estradiol and Drospironon combined with retinoid and antibiotic topical therapy resulted in satisfactory outcome in 22 years old female patient with Acne vulgaris.

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