

# To Study the Associated Diseases and Possible Co-Morbidities of Acne Vulgaris in Females

S Tamilarasi\*

Department of Dermatology Venereology and Leprosy, Sree Balaji Medical College & Hospital Affiliated to Bharath Institute of Higher Education and Research, Chennai, Tamil Nadu, India

## ABSTRACT

Increased prevalence of acne vulgaris was noted in less than 20 years of age group. The most commonly involving acne grade 1s III, irrespective of age groups. In this study, most common associated condition 1s seborrhea (75%). Other associations include acanthosis nigricans (72%), alopecia (69%), hirsutism (68%), menstrual irregularities (65%) was noted. Insulin resistance was noted 1n 63% of women with acne vulgaris. In this study, elevated (>2 times) LH: FSH was noted in 54% of women with acne vulgaris. Insulin resistance and elevated LH: FSH, both found in 39% of women. So, acne vulgaris is associated with disorder of androgen and insulin. Acne vulgaris is an indicator to androgens levels changes.

**Key words:** Acne vulgaris, Acanthosis nigricans, Insulin

**HOW TO CITE THIS ARTICLE:** S Tamilarasi, To Study the Associated Diseases and Possible Co-Morbidities of Acne Vulgaris in Females, J Res Med Dent Sci, 2021, 9(8): 109-110

**Corresponding author:** S Tamilarasi  
**e-mail** ✉: editor.pubs@gmail.com  
**Received:** 16/07/2021  
**Accepted:** 10/08/2021

## INTRODUCTION

Acne vulgaris is a very common inflammatory skin disease. It's a major component of many systematic syndromes. A thorough knowledge of these syndromes are essential to understand the pathogenesis of this disease and would bring in a new therapeutic knowledge [1-2]. Hence study aims to determine the associated diseases and possible comorbidities of acne vulgaris in female patients.

## METHODOLOGY

Patients who are clinically diagnosed with Acne Vulgaris are taken for the study and complete dermatological examinations were done followed by hormonal assessments such as serum insulin, TSH, FSH and LH levels were done.

## RESULTS AND DISCUSSION

Insulin resistance was found in 36% of women of less than 20 years of age. Women 1-25 years had 14% and more than 25 years of age had 13%. Impaired LH: FSH was found in 28% of women of less than 20 years of age. Women in 21-25 years had 17% and more than 25 years of age had 10%. According to our study, seborrhea was found in 75% of women with acne vulgaris. Among these, 83.3% had acne grade III. 76.9% had acne grade IV and 35.7% had

acne grade II, Which is statistically significant, in Pearson Chi-Square test  $P=0.001$ . ( $P<0.005$ ).

Seborrhea (greasy skin) was the most common associated condition. According to our study, menstrual irregularities were found in 65% of women with acne vulgaris. Acanthosis nigricans was found in 72% of women with acne vulgaris. Among these 76.7% of women had grade III acne, 71.4% had grade II acne and 61.5% had grade IV acne. In our study, insulin resistance was found in 63% of women with acne vulgaris. In the study group, we found the increase in value of the LH & FSH ratio was more than two in patients with acne vulgaris.

In the present study, we observed female acne patients had seborrhea (75%), alopecia (69%), and menstrual irregularity (65%), acanthosis nigricans (72%) hirsutism (68%), and insulin resistance (63%), impaired LH: FSH (54%). Many authors reported acne; hirsutism, seborrhea, menstrual irregularity and alopecia are a common manifestation of hyperandrogenism [3-10].

## REFERENCES

1. Jebraile R, Kaur S, Kanwar AR, et al, Hormone profile and polycystic ovaries in acne vulgaris. Indian J Med Res 1994; 100:73-6.
2. Williams C, Layton AM. Persistent acne in women: Implications for the patient and for therapy. Am J Clin Dermatol 2006; 7:281-290.
3. George R, Clarke S, Thiboutot D. Hormonal therapy for acne. Semin Cutan Med Surg 2008; 27:188-196.

4. Peigne M, Villers-Capelle A, Robin G, et al. Hyperandrogenism in women. Paris, France 2013; 42:1487-99.
5. Thiboutot D, Knaggs H, Gilliland K, et al. Activity of the type-I 5a reductase is greater in the follicular infra infundibulum compared to the epidermis. Br J Dermatol 1997; 136:166-171.
6. Thiboutot D, Knaggs H, Gilliland K, et al. Activity of the type-I 5a reductase and 17b hydroxy steroid dehydrogenase in the infra infundibulum of subjects with and without acne vulgaris. Dermatology 1998; 196:38-42.
7. Guy R, Green M, Keelay T. Modelling of acne in vitro. J Invest Dermatol 1996; 106:176-182.
8. Melnik B, Plewig G. New lipid biochemical aspects in the pathogenesis of a follicular keratinisation disorder in acne vulgaris. Zhautki 1998; 591-596.
9. Leeming JP, Holland K, Canliffe WJ. The microbial colonization of inflamed acne vulgaris lesions. Br J Dermatol 1998; 118:203-208.
10. Karsey P, Sussman M, Duhl M. Delayed skin test reactivity to propionibacterium acnes correlates with severity of inflammation acne vulgaris. Br J Dermatol 1980; 103:651.