

Atopic diseases in patients with acne of a dermatologic center in Bogotá, Colombia

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Introduction

Acne is a chronic inflammatory and multifactorial skin disease associated with changes in gut and skin microbiome, hormones and sebaceous production. Likewise, atopy pathophysiology also involves gut and skin microbiome alterations and magnified immune reactions leading to CD4+ Th2 differentiation and overproduction of immunoglobulin E (IgE). Studies published are contradictory regarding an association between acne and atopy, notwithstanding both conditions involve inflammatory, immunological and infectious features. Furthermore, both entities have been described as negatively affecting the quality of life of patients. The objective of this study is to describe the frequency of atopic diseases in patients with acne vulgaris and its compromise in life quality, in a dermatological Center in Bogotá, Colombia.

Materials and methods

We performed a multicentric observational cross-sectional study in patients diagnosed with acne in Bogota, Colombia. We analyzed 500 patients from May 2021 to March 2022. We assessed history of atopy, Dermatology Life Quality Index (DLQI) and gastrointestinal symptoms in patients with acne. We performed an univariate analysis. Data was collected in Microsoft® Excel 365 and analyzed with Stata®.

DLQI result	Rhinitis	Asthma	Atopic Dermatitis	Total
No effect	41	6	7	54
Small effect	57	5	14	76
Moderate effect	24	6	8	38
Very large effect	6	3	2	11
Extremely large effect	1	0	0	1
Total	129	20	31	151

Table 1. DLQI result according to patients with rhinitis, asthma and atopic dermatitis

Results

Of 500 patients with acne, 151 had atopy history (30.20%). More than half of the sample were women 66.23% (n=100). Regarding gastrointestinal symptoms, abdominal pain was present in 39.07% of the patients (n=59), 38.41% had flatulence (n=58) and a third of the patients had disturbed bowel habit, abdominal bloating and dyspepsia with 33.78%, 33.77% and 29.14%, respectively. Patients with asthma had the most severe compromise on quality of life with 30% (n=6) of them having moderate effect on QoL, followed by atopic dermatitis with 25.81% (n=8) and rhinitis with 18.6% (n=24).

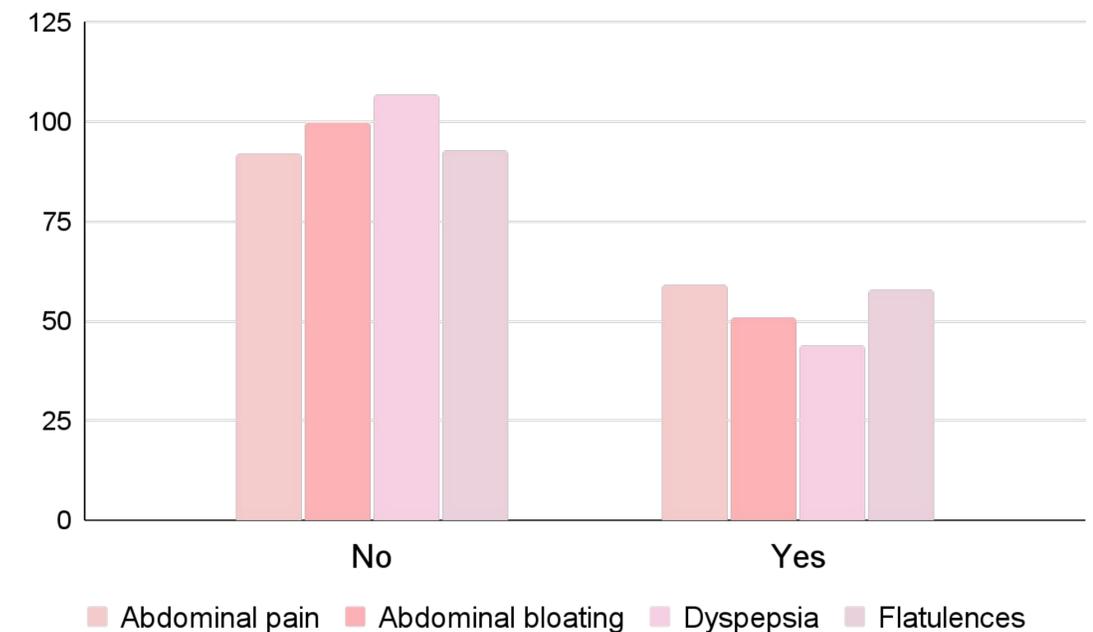


Figure 1. Frequency of gastrointestinal symptoms in patients with acne and atopic comorbidities

Conclusions

In our study we found high frequencies of acne concomitant with atopic diseases, particularly with rhinitis. A higher frequency of gastrointestinal symptoms was found in the presence of acne and atopic diseases, which could be explained by the systemic inflammation present in these entities and the pathophysiological role of the intestine-skin axis. Further studies and research are needed to evaluate the possible association between acne and atopic diseases that contribute to the knowledge of the chronic inflammatory process described in both diseases.

References