

Introduction

Chronic inflammatory dermatoses, such as acne, have been associated with psychiatric history and alterations in the physiology of the gastrointestinal tract. These have been related to psychological or psychiatric disorders in at least 30% of the patients. Little is known about dermatological comorbidities in patients with acne. The aim of this study is to evaluate the frequency of psychiatric and dermatological comorbidities and the presence of gastrointestinal symptoms in patients with acne.

Material and methods

An observational, retrospective, cross-sectional study was performed. A total of 504 patients with a diagnosis of acne were collected between July 2021 and March 2022 in a dermatology center in Bogota, Colombia. The variables included were sex, age, gastrointestinal symptoms, and psychiatric and dermatologic comorbidities. Data were analyzed with Microsoft Excel 2021.

Dermatological comorbidity?	Presence of gastrointestinal symptoms		Total
	Yes	No	
Yes	153	86	239
No	168	97	265
Total	321	183	504

Table 1 Acne patients with psychiatric comorbidities who develop gastrointestinal symptoms with involvement of the gut-brain-skin axis are presented.

Results

Of 504 patients, 67.26% (n=339) were female. The median age was 20 years. We found that 47.42% (n=239) had other dermatoses. Among these patients 20.50% (n=49) had psychiatric comorbidities, of which 9.20% (n=22) had mixed disorder, 7.94% (n=19) had anxiety and 3.34% (n=8) had depression. Of the 186 (36.90%) patients who had seborrheic dermatitis (SD) and acne, mixed and anxiety disorders were present in 32.65% (n=16) each, and 14.28% (n=7) had a history of depression. Of the patients with dermatological comorbidities (41.26%, n=208), 6.15% (n=31) showed at least mild depression according to the PHQ-9 scale, and of these 19.35% (n=6) showed severe depression. Of patients with dermatological comorbidities and at least minimal anxiety 47.42% (n=239) according to the GAD-7 scale, 77.82% (n=186) and 9.62% (n=23) corresponded to patients who also had SD and atopic dermatitis respectively. Gastrointestinal symptoms were present in 63.69% (n=321) of patients. Dermatologic and psychiatric comorbidities were in 30.35% (n=153) and 15.47% (n=78) of patients with gastrointestinal symptoms, respectively. Dermatologic, psychiatric and gastrointestinal symptoms were simultaneously in 7.14% (n=36) of patients.

Psychiatric comorbidity?	Presence of gastrointestinal symptoms		Total
	Yes	No	
Yes	78	20	98
No	243	163	406
Total	321	183	504

Table 2 Frequency of gastrointestinal symptoms in patients with acne and dermatological comorbidities

Conclusions

The results of the present study show the influence of the interaction of the elements of the gut-brain-skin axis, of which the cutaneous and intestinal microbiota is known to be an essential element for its proper functioning. The alteration of this microbiota leads to the appearance of gastrointestinal symptoms and the activation of the inflammatory response, which consequently disturbs skin function. This is manifested in the appearance of inflammatory diseases as we found in our study, highlighting the presence of SD and atopic dermatitis.

Similarly, psychiatric comorbidities have been described to impact the natural history of inflammatory skin diseases. By considering this, our study supports what has been reported in the literature; however, our population presented a lower prevalence of these diseases.

Future studies are needed to identify these alterations associated with the gut-brain-skin axis, in order to screen for early detection of diseases related to this axis, and thus approach patients in a multidisciplinary manner.

References:

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