

# Comorbidities in alopecia areata: first approaches in Colombia

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## Introduction

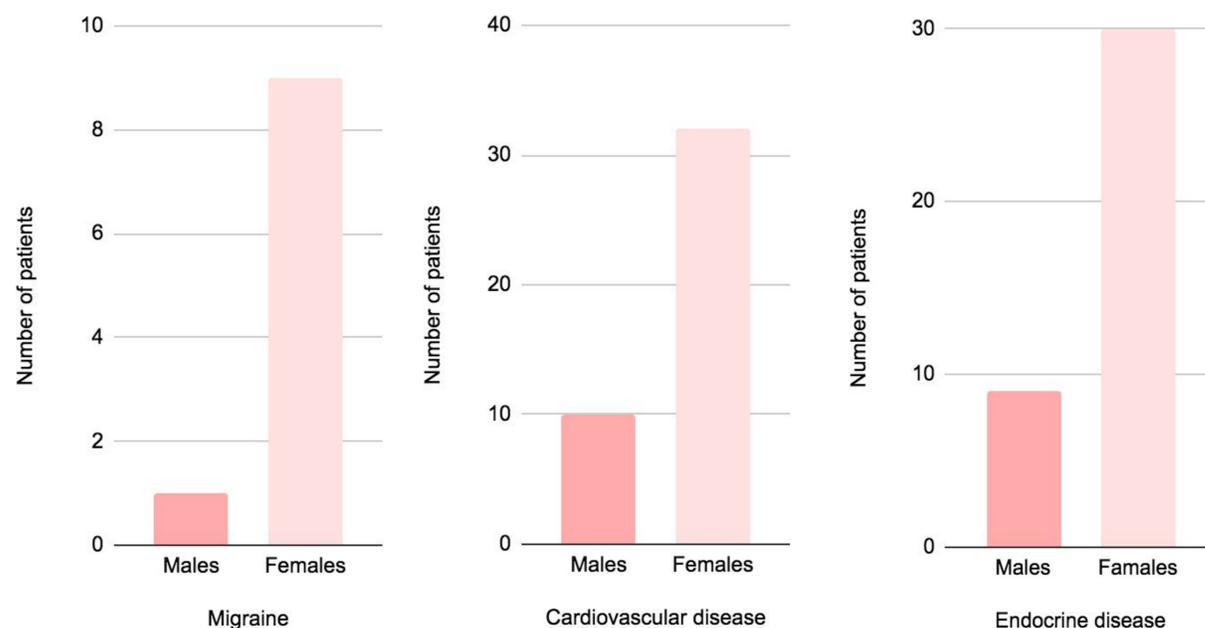
Alopecia areata is a chronic disease caused by an autoimmune response and the loss of the immune-privilege of the hair follicle. It is more prevalent in females and young individuals, although the general population has a 1.7% lifetime risk of developing this disease. This entity has been associated with metabolic, autoimmune, atopic, psychiatric comorbidities, other dermatoses and connective tissue diseases. Despite the fact that multiple studies have been carried out assessing comorbidities associated with this disease, the findings are divergent. The objective of this study is to describe the frequency of presentation of different comorbidities in patients with alopecia areata in a dermatological center.

## Materials and methods

We conducted a cross-sectional study. Data was collected from medical records of 265 patients with alopecia areata from January 2018 to December 2021 in a dermatology center in Bogotá, Colombia. Variables analyzed were age, sex and comorbidities. We used relative and absolute frequencies, and an univariate analysis was performed. We collected and analyzed data with Microsoft Excel 2021.

## Results

Out of 265 patients, 161 were females (60.75%). In this sample almost half of the female population (n=118, 44.53%) and more than a half of male population (n=147, 55.47%) had at least one comorbidity. We found that 42 patients had cardiovascular disease (15.85%), hypertension being the most frequent in 30 patients (11.32%). Endocrine comorbidities were found in 39 patients (14.72%), 27 had hypothyroidism (10.19%) and 6 had type 2 diabetes (2.26%). Atopy was found in 27 patients (10.19%), out of this group 22 had atopic dermatitis (8.3%) and 4 had rhinitis (1.51%). Dermatologic comorbidities were present in 21 patients (7.92%), 5 patients with rosacea (1.89%) and 3 with seborrheic dermatitis (1.13%). The most recurrent rheumatologic disease was Sjogren disease present in 4 patients (1.51%). Migraine was present in 10 patients (3.77%). The sex ratio (females:males) for cardiovascular comorbidities was 3.2:1, 3:1 for endocrine diseases and 9:1 for migraine.



**Figure 1.** Percentage of comorbidities present in patients with alopecia areata according to sex

## Conclusions

We found a higher frequency of cardiovascular diseases followed by endocrinological diseases, being hypertension and hypothyroidism the most frequent diseases within the entities assessed. According to the literature similar associations have been reported suggesting the presence of circulating auto-reactive cells in alopecia areata leading to thyroid dysfunction. We believe that further studies could demonstrate pathophysiological relationships between these diseases, identifying potential therapeutic targets. Additionally, according to our population, women presented a higher prevalence of cardiovascular/endocrinological comorbidities and migraine in about 3 and 9 times more than men, respectively, although it is well known that endocrinological diseases and migraine have a higher prevalence in women globally. Furthermore, the most prevalent dermatological comorbidities were rosacea, seborrheic dermatitis and atopic dermatitis suggesting a probable common etiopathogenesis that is currently under study.

## References

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