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Original Research Article

A Clinical Study of Comorbidities among Patients withAlopecia Areata

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Abstract:

Introduction: Alopecia may be interpreted as a loss, miniaturization, involution, or increased fragility of thehair at all hair bearing sites, such as scalp, face, eyebrows, eyelashes, and body. AA is hypothesized to be an organ specific autoimmune disease mediated by T lymphocytes directed to the hair follicles. Although genetic predispositions and environmental factors may trigger the initiation of the disease, the exact cause is still unknown.

Aim: To document the comorbid cutaneous and extra cutaneous conditions and the age of their onset in patients with Alopecia Areata.

Methodology: This study was done in the Dermatology Department of R. L. Jalappa Hospital from December 2013 to January 2015. At 95% confidence interval and 2% absolute error, 60 subjects were studied.

Results: Maximum patients in our study belonged to age group 31 to 40 years of age. Out of the 60 patients with AA, 23.3% (14patients) had atopic dermatitis and 3.3% (2patients) had vitiligo. Most atopic and autoimmune diseases were observed at ages of 11 to 30 years and41 to 50 years.

Conclusion: Patients with AA are at an increased risk of multiple comorbidities, including psychiatriccomorbidity, atopic dermatitis, thyroid diseases, allergic rhinitis, diabetes mellitus, hypertension and vitiligo compared with the general population.

Keywords: Alopecia Areata, Comorbidities, Psychiatric disorders.

Introduction

Alopecia may be interpreted as a loss, miniaturization, involution, or increased fragility of thehair at all hair bearing sites, such as scalp, face, eyebrows, eyelashes, and body.

Cornelius Celsus who flourished in Rome has also described Alopecia Areata which even now issometimes referred to as *'area celsi*'. Sauvages (1706-67) first used the term Alopecia Areata (AA). [1,2]

The etiology of AA has eluded investigators for years and therefore a multitude of associations have been proposed by researchers in the field of trichology. One of the strongest associations is with autoimmunity. This view has been supported by the occurrence of AA in association with other autoimmune disorders like vitiligo, lichen planus, morphea, atopic dermatitis, Hashimoto's thyroiditis, pernicious anemia and diabetes mellitus. More recently, it has been reported that there is a high prevalence of mood adjustment, depressive and anxiety disorders in patients with AA. This element of psychiatric morbidity has widely been purported to be both, a cause and effect of AA. [3,4]

AA is hypothesized to be an organ specific autoimmune disease mediated by T lymphocytes directed to the hair follicles. Although genetic predispositions and environmental factors may trigger the initiation of the disease, the exact cause is still unknown. Other proposed origins reported include infectious agents, cytokines, emotional stress, intrinsically abnormal melanocytes or keratinocytes, and neurologic factors. The aim of the index study is to document the comorbid cutaneous and extra cutaneous conditions and the age of their onset in patients with Alopecia Areata. Results:

Methodology

This study was done in the Dermatology Department of R. L. JALAPPA HOSPITAL from December 2013 to January 2015. To conduct a clinical study of comorbidities among patients with Alopecia areata, which has an estimated prevalence of 0.1- 0.2% in the general population. [5] At 95% confidence interval and 2% absolute error, 60 subjects were studied. An informed written consent was taken.

Inclusion Criteria for Study Groups: All clinically diagnosed patients with Alopecia areata.

Exclusion Criteria:

- Patients on immunosuppressive therapy, radiotherapy and chemotherapy.
- Diagnosis will be made clinically and based on

the history of abrupt patchy hair loss with or without progression and absolutely normal looking scalp without any secondarychanges on examination.

Results:

Age In Years	No. of Cases	Percentage
<10	5	8.3
11-20	11	18.3
21-30	18	30
31-40	16	26.6
41-50	7	11.6
51-60	3	5

Maximum patients in our study belonged to age group 31 to 40 years of age. We had around 56.6% males and 43% female subjects in our study.

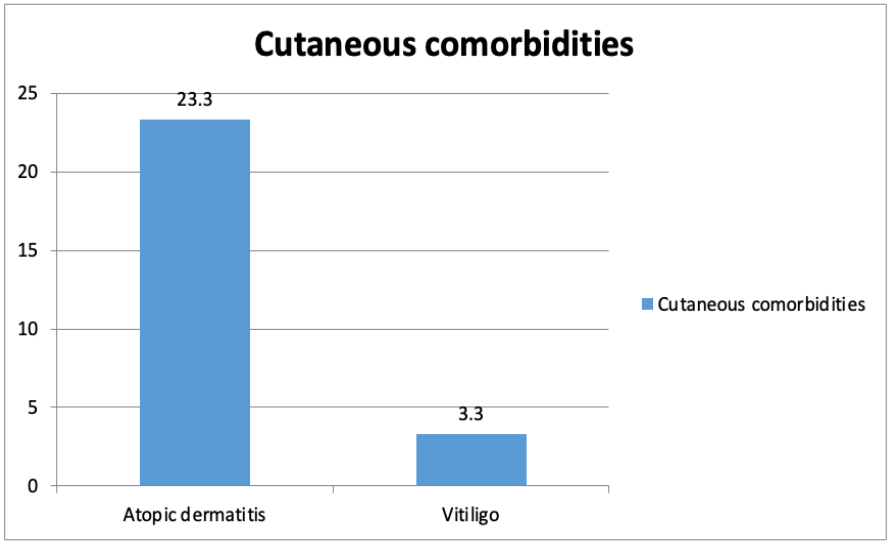

Figure 1: Cutaneous comorbidities

Out of the 60 patients with AA, 23.3% (14patients) had atopic dermatitis and 3.3% (2patients) had vitiligo. Most atopic and autoimmune diseases were observed at ages of 11 to 30 years and41 to 50 years.

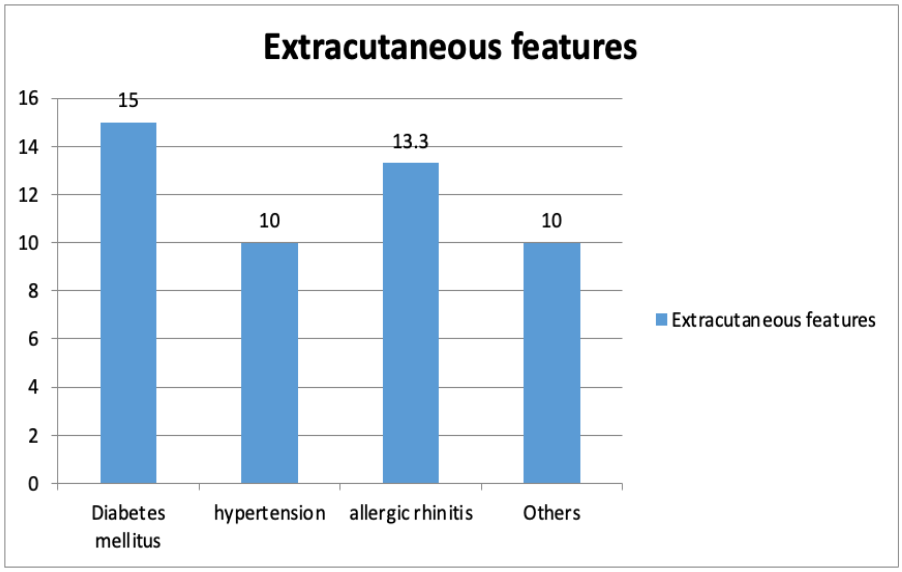

Figure 2: Extracutaneous features

15% (9patients) in the age group 41 to 50years had diabetes mellitus. 10% (6patients) had hypertension. 13.3% (8patients) had allergic rhinitis. 10% had other conditions like rheumatoidarthritis, ichthyosis

vulagris and pemphigus vulgaris. 70% (42patients) presented with psychiatric comorbidity and 21.7% had thyroid disorder.

Discussion

In our study, most patients belonged to the age group of 21- 30 (30%) closely followed by 31-40 years age group which with 26.6% patients. Similarly, the age distribution showed high incidence in the 3rd and 4th decades as per many other observers. Nail changes were noted in 20% of patients. The commonest nail change being pitting seen in 11 patients (18.3%). Longitudinal ridging was present in 16.6% and onychodystrophy, melanonychia and beaus lines were noted in 1.6% of patients similar to earlier studies. [3,5,6,7]

It was interesting to note that 36.5% of the lesions were present in occipital region followed by vertex with 25% in this study which is similar to the studies done by others. [8]

In the present study, we did not find a single case of comorbid psoriasis whereas according to a study conducted by Huang et al 6.3% had psoriasis and psoriatic arthritis. [9,10] Huang et al noted 4.3% cases of SLE whereas in the present study we did not find even a single patient with comorbid lupus erythematosus. According to a study, 22.2 % had generalized anxiety disorder, 7.4 % had depressive episodes and 7.4 % presented with social phobia. The presence of generalized anxiety or a depressive episode was also associated with worst adjustment. This shows that an integral approach to the illness is necessary, given that treatment of a depressive or anxious state, or working with the personality traits of the patients, would improve their adaptation to the disease, and perhaps its dermatologic prognosis. [11] There is a high psychiatric comorbidity in AA and therefore more systematic psychiatric evaluations of these patients are needed. A satisfactory overall adaptation to the illness in mild/moderate forms of the disease is the norm, but adaptation and psychiatric comorbidity in severe forms (totalis, universalis) are unknown.

Conclusion

Patients with AA are at an increased risk of multiple comorbidities, including psychiatric comorbidity, atopic dermatitis, thyroid diseases, allergic rhinitis, diabetes mellitus, hypertension and vitiligo compared with the general population. AA is strongly related to atopic and autoimmune diseases and also there is ahigh psychiatric comorbidity.

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