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Clinico Etiological Study of Alopecia AREATA

Dr. Gonu Bharathi[1], Dr. Peddireddy Venkata Ramana[2], Dr. K Sridevi[3], Dr. G Usha[4], Dr. G Ramesh Kumar[5]
(Department of DVL, S.V.Medical College, Tirupati/Dr. NTR University of Health Sciences, AP, INDIA)

Abstract:
Background: *Alopecia Areata is a chronic inflammatory, non-scarring organ specific, auto immune disease, probably mediated by auto-reactive T-cells which affects hair follicles and sometimes nails. Alopecia areata is a common cause of non- cicatricial Alopecia, usually affecting scalp but can affect the rest of the body as well.*
Aims: *To study the etiological aspects of Alopecia areata, To know the various morphological patterns of Alopecia areata.*
Material and Method: *A total of 50 patients with Alopecia areata attending DVL OP SVRR Govt. Gen. Hospital, Tirupati (A.P) are studied.*
Results: *Scalp is the commonest site affected and circumscribed pattern is the most common morphological type. There is a significant association of psychological stress, atopy and other auto immune conditions with Alopecia areata.*
Conclusion: *All the patients presenting with Alopecia areata should be asked about psychological stress, atopy and shoud be screened for other auto immune conditions.*
Keywords: *Alopecia areata, Atopy, Autoimmunity, Circumscribed pattern, Scalp.*

I. Introduction

The word Alopecia is of latin origin which means hair loss. Areata means "occurring in patches" whereever there is hair, there can be Alopecia areata. Clinically it is characterized by the sudden appearance of round or oval patch of non-scarring asymptomatic hair loss, as a self limiting episode or recurrences at varying intervals over many years with unpredictable course. Although Alopecia areata is not life threatening, it causes lots of cosmetic concern. Unfortunately there is lot of ambiguity about etiology and pathogenesis of the disease. Among the many factors implicated are the patient genetic constitution, atopic state, non specific immune and organ specific auto immune reaction and possibly emotional stress.

II. Aims

To study the etiological aspects of Alopecia areata, To know the various morphological patterns of Alopecia areata.

III. Material And Mthodology

In the present study, we have selected 50 consecutive patients of all age groups and both sexes, presenting with patchy hair loss who attended Dermatology outpatient department at S.V.R.R.G.G. Hospital, Tirupati (A.P) During examination, a detailed history regarding the disease was taken. Age at onset, duration and progress of the disease, personal and family history of atopy, similar diseases with special reference to autoimmune diseases were noted in detail. Psychological stress was assessed by using Holmes Rahe Stress scale. In all patients, site of lesion, pattern and extent of the hair loss was noted. Nail changes were also recorded. The diagnosis of Alopecia areata was made based on clinical grounds.

All the patients were subjected to a battery of investigations such as complete haemogram, urine analysis, random blood sugar, VDRL and Thyroid function tests. Clinical findings and laboratory data were analysed. An attempt was made to determine the possible cause of Alopecia areata and the incidence of various morphological patterns.

IV. Observations And Results

The observations of the study are as follows:-

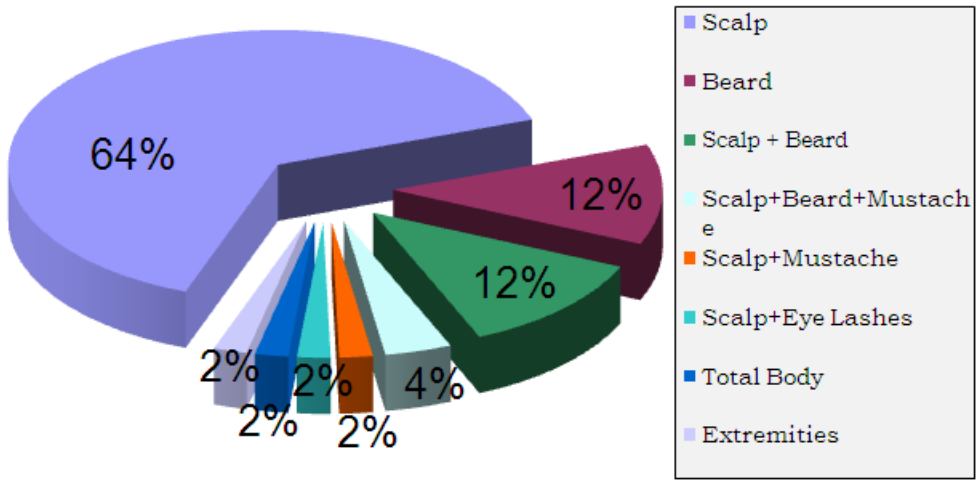
TABLE 1: Age and Sex incidence of Alopecia areata

Age	0-10	11-20.	21-30	31-40	41-50	51-60
Male	1	3	11	7	3	5
Female	5	5	5	3	1	1
Total	6	8	16	10	4	6
Percentage	12%	16%	32%	20%	8%	12%

Out of 50 cases of Alopecia areata studied, the age of the patients ranged from 4-60 years. The maximum incidence of Alopecia areata was in the age group of 20-40 years (52%). Males outnumbered females with ratio of 3:2.

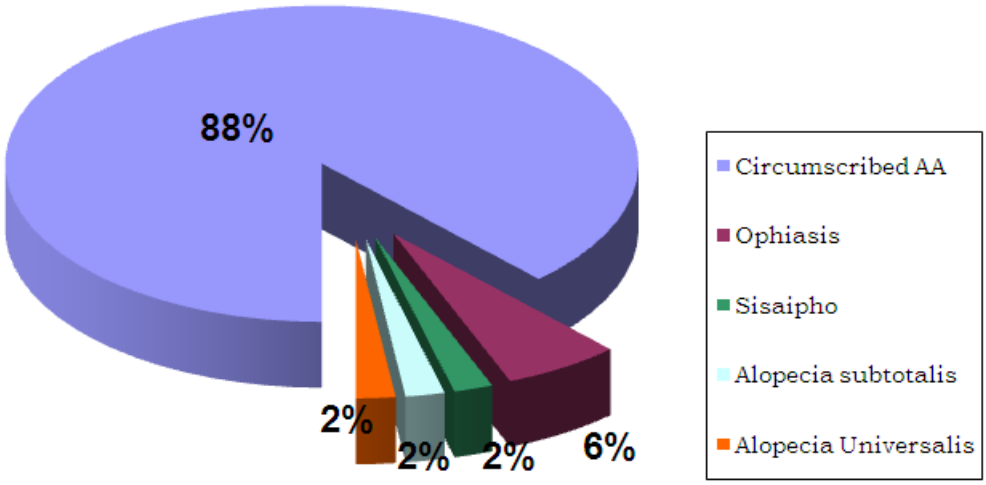
Site Of Involvement Of Alopecia Areata

In this study, Scalp was involved in 42 cases either alone or along with beard, mustache eye lashes or eye brows Only beard and along with mustache is in 6 cases, extremities are involved in one case and Alopecia universalis was found in one case out of 50 cases studied as shown in **Pie chart No.1**



Morphological type

Circumscribed pattern of Alopecia areata was seen in 44 cases, ophiasis was in three cases, sisaphio in one case, Alopecia subtotalis was seen in one case and one case was Alopecia universalis out of 50 cases. **Pie chart No.2**



Recurrence

History of recurrence was present in 17 cases, of these 7 cases were associated with atopy.

Associated Symptoms
Mild pruritus over the patch was complained by four patients .

Associated disorders

Psychological stress preceeding the onset of Alopecia areata was observed in 12 cases. History and clinical findings suggestive of atopy was found in 10 cases of Alopecia areata. Diabetes was found in four cases. Thyroid profile suggestive of hypothyroidism was found in two cases and hyperthyroidism in one case.

Associated Disorders (Table 2)

Disorder	Number	Percentage
Psychological stress	12	24
Atopy	10	20
Diabetes	4	8
Hypothyrodism	2	4
Hyperthyrodism	1	2

Nail changes

Nail changes were seen in eight cases of Alopecia areata among which pitting was seen in six cases. Among the cases with nail pitting two cases had ophiasis and one had Alopecia universalis. Longintudinal ridging and trachyonychia were found each in one case.

Table 3

Nail Changes	Number	Percentage
Pitting	6	12
Longitudinal ridging	1	2
Trachyonychia	1	2

Spontaneous re-growth

History of spontaneous re-growth of hair was observed in the previous episode in four cases (8%).

V. Discussion

In our study, the age of patients ranged from 4 to 60 years. Though Alopecia areata can occur at all ages from just born to old age, there is a high incidence among young adults. The peak incidence of Alopecia areata(52%) was found in between ages of 20 to 40 in our study. This supports the findings of Jain S et al (2003)[1] who observed peak incidence 52.1% in the age group of 20 to 39 years.

In our study, we observed a male to female ration of 3:2. This agrees with the observation of Bastos Araujo A et al (1967)[2] and Thomas EA Kadyan RS (2008)[3] who observed 2.5:1.

In this study, family history of Alopecia areata was present in 2% of cases which is close to the observation of Manzoor S, Masood (2001)[4] as 1.5%

Scalp seems to be the most common site affected by Alopecia areata. In our study scalp was involved in 88% of cases. This is akin to the observation of Dawber et al (1989)[5] who stated that the scalp was the first affected site in over 60% of cases.

Circumscribed Alopecia areata pattern was the commonest constituting 88% of cases, ophiasis is 6%, sisaipho is 2%, Alopecia universalis is 2% and Alopecia subtotalis is 2% had been observed in our study.

Nail changes were observed in 16% of our patients among which pitting was the commonest finding. Nail involvement observed by Thomas EA et al (2008)[3] in 16.8% of cases.

History of previous episodes of Alopecia areata was seen in 34% cases in our study. Out of 34% of cases 14% cases were associated with atopy. where as Stanly J swierzewski (2001)[6] observed in 25% of cases. In our study, we observed, psychological stress in 24% of the cases which in accordance with Chantal bolduc et al (2006)[7] who had observed stress in 17% to 22% of cases.

In this study, we observed 6% of thyroid disorders - hypothyroidism in 4% and hyperthyroidism in 2% associated with Alopecia areata which is nearer to the findings of Puvilai et al (1994)[8] reported associated Thyroid disorders in 7.1% of cases. Diabetes mellitus was associated in 8% of cases which is similar with Thomas EA et al[(3)] observation in 7.1%.

In the final analysis, we agree with the opinion of Muller SA et al(1965)[(9)] and Thomas EA et al (2008)[3] that auto-immune disorders are more commonly associated with Alopecia areata and that the basis of such association is the formation of organ specific auto-antibodies that may play pathogenic role in both the disorders.

VI. Conclusion

1. 50 cases of Alopecia areata were evaluated clinically. All the relevant investigations were carried out.
2. Alopecia areata is seen in all ages with majority of the cases in 20 - 40 years of age.
3. It is seen in both sexes with male predominance.
4. Scalp is the commonest site affected.
5. Circumscribed pattern is the commonest morphological type.
6. Recurrence is seen in considerable number of cases and atopy is often associated with recurrence.
7. There is a significant association of psychological stress and atopy with Alopecia areata.
8. Autoimmunity is one of the aetiological hypothesis for Alopecia areata. In our study we could observe association of autoimmune conditions such as thyroid-disorders, diabetes mellitus, in 14% of the patients.
9. More elaborate studies with larger groups of patients utilizing modern investigative facilities may help for better etiological evaluation.

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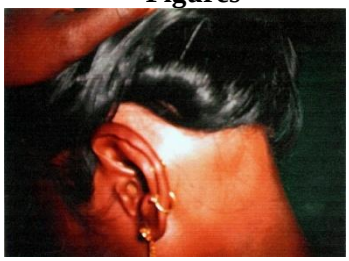
Figures

1.circumscribed Alopecia



2. Ophiasis

3. Sisaphio areata

4. Alopicia subtotalis

5. Alopecia universalis