

## DISEASE ASSOCIATED WITH CLINICALLY DIAGNOSED UNTREATED PATIENT OF ALOPECIA AREATA: A CROSS-SECTIONAL STUDY AT TERTIARY CARE HOSPITAL BIKANER (RAJASTHAN)

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### Abstract

**Background:** Alopecia areata (AA) is an autoimmune, non-scarring form of alopecia with wide range of clinical presentations from patchy alopecia to complete loss of scalp hair (Alopecia totalis) and or the entire body (alopecia universalis). To study the disease associated with clinically diagnosed untreated patient of Alopecia Areata.

**Methods:** The prospective cross-sectional study was conducted on all new cases of alopecia areata irrespective of age and sex attending the outpatient department of Dermatology, Venereology and Leprosy at SP Medical College, Bikaner from September 2018 to September 2019.

**Results:** In our study 20.90% patients were present with associated disease maximum (15.45%) patients were present with atopy followed by 2.72% thyroid disease, 0.91% diabetic, down syndrome, psoriasis respectively.

**Conclusion:** Majority of patients were associated with atopy.

**Keywords:** Associated disease, Alopecia areata, DM, HT.

### Introduction:

Alopecia areata (AA) is an autoimmune, non-scarring form of alopecia with wide range of clinical presentations from patchy alopecia to complete loss of scalp hair (Alopecia totalis) and or the entire body (alopecia universalis).<sup>1</sup> The disease affects most commonly scalp hairs, but it may also involve eyebrows, eyelashes, beard, pubic, axillary hair and others. The exact pathogenesis of the disease yet remains to be clarified; however autoimmune, genetic and environmental factors have been implicated. Alopecia areata occurs in populations worldwide. It affects 1.7% of the population at some point in their lives.<sup>1</sup> Sixty percent of patients present with their first patch before 20 years of age and thus patients present with considerable anxiety.<sup>2</sup>

Alopecia areata incidence appears to increase almost linearly with the age, but the mean age of onset appears between 25-36 years.<sup>3</sup> Early onset AA between 5 and 10 years old predominantly presents as more severe subtypes.<sup>4</sup> Data shows no demonstrable sex predilection. It is associated with increased risk of other autoimmune disease (16%), including lupus erythematosus, vitiligo and autoimmune thyroid disease. Over half of patient with alopecia areata experience poor health – related quality of life (QOL). Though patient of AA of all age group and both sexes may experience decreased QOL with AA, risk factor for poor health related QOL include the age between 20 and 50 years, female sex, lightening of skin color, hair loss more than 25%, family stress and job change. Patient with

extensive AA experienced more adverse psychological effect than those with limited AA.<sup>4</sup>

### Material and Methods

The prospective cross-sectional study was conducted in the department of Dermatology, Venereology and Leprosy, Sardar Patel Medical College, Bikaner, Rajasthan. The approval was taken from the institutional ethics and thesis committee.

**Source of data-**

Study population includes all new cases of alopecia areata irrespective of age and sex attending the outpatient department of Dermatology, Venereology and Leprosy at SP Medical College, Bikaner from September 2018 to September 2019 were enrolled.

**Method of collection of data-**

All the selected alopecia areata patient's data were recorded in proforma as epidemiological data (name, age, sex & occupation), relevant history, clinical examination including general, systemic and cutaneous examination, laboratory investigation, treatment history and characteristic lesion were also like; Number of patches, distribution, pattern, morphology, and characteristic dermatoscopic finding were noted.

**Inclusion criteria-**

- 1- All clinically diagnosed case of AA
- 2- Who had given informed consent
- 3- Untreated patient.

**Exclusion Criteria-**

- 1- Patient who had already treated and refused to examine.

**Data Analysis:**

To collect required information from eligible patients a pre-structured pre-tested proforma was used. For data analysis Microsoft excel and statistical software Epi-info was used and data were analyzed with the help of frequencies, figures, proportions, measures of central tendency.

**Results****Table 1:** Socio-demographic profile

Mean age	23.76±12.50 Yrs
Male : female	1.89 : 1
Urban : Rural	1.04 : 1
Hindu : Muslim	14.71 : 1
Duration of onset	23.51±12.70 Yrs

Mean age of patient was 23.76±12.50 Yrs. Male female ration was 1.89:1.

**Table 2:** Association with other disease

Associate disease	No of patients (n=110)	Percentage
Diabetes	1	0.91
Atopy	17	15.45
Down syndrome	1	0.91
Thyroid	3	2.72
Psoriasis	1	0.91
Total	23	20.90

In our study 20.90% patients were present with associated disease, maximum (15.45%) patients were present with atopy followed by 2.72% thyroid disease, 0.91% diabetic, down syndrome, psoriasis respectively.

**Discussion**

A prospective cross-sectional study was conducted in the department of Dermatology, Venereology and Leprosy, Sardar patel medical college, Bikaner, Rajasthan.

Alopecia areta (AA) is an autoimmune disease which frequently starts in childhood.<sup>5,6</sup> It has variable presentation not only in the time of onset but also in the duration, extent, and pattern of hair loss.<sup>7,8</sup> Moreover, the course of disease is unpredictable as such there is spontaneous regrowth of hair occurring in 80% of patients within the 1<sup>st</sup> year and sudden relapse in some patients.<sup>9,10</sup> Due to the clinical variability and unpredictable nature of disease, diagnosis and management may be difficult and challenging.

Nowadays, dermoscopy is used for the evaluation of hair loss either scarring or non-scarring. Dermoscopic finding helps in diagnosing different cause of hair loss and obviate unnecessary biopsies<sup>11</sup>

In this study, we evaluated dermoscopic findings in 110 patients with Alopecia areta (AA).

In our study maximum 38 (34.55%) patients were 16-30 Yrs of age group followed by 35 (31.82%) patients of 31-45 Yrs age group, 32 (29.09%) patients of 0-15 Yrs age group and only 2 (1.82%) patients of more than 60 Yrs age group.

Mean age of patients was 23.76±12.50 Yrs and mean duration of onset of disease was 23.51±12.70 Yrs.

Globally, the incidence of Alopecia Areata varies from 0.57% to 3.8%.<sup>12</sup> In India, it is 0.7% according to a hospital-based study.<sup>3</sup> The mean age of onset of Alopecia Areata is in the fourth decade of life. However, in Beard alopecia areata the onset of disease can occur over a wide range of ages.<sup>4</sup> In our study, it was 23.76±12.50 years, which is in accordance with the mean age of 39.1 years as reported by Saceda-Corralo *et al.*<sup>13</sup> The mean age of participants was 26.32 years and similar result observed by with Rudnicka *et al.*'s study, Karain's study (25 years), and also in Karadağ Köse and Güleç's study (25.15 years).<sup>14,15</sup>

In present study 65.45% patients were Male and 34.55% patients Female. Mahmoudi H *et al.*<sup>16</sup> was observed that out of 200 patients, 116 (58%) were males and 84 (42 %) were females; a male preponderance was noted in this study. In present study 54 (49.09%) patient had rural and 56 (51.91%) urban residential background.

Out of 110 patients, 23(20.90%) patients had associated disease, 17 (15.45%) patients were present with atopy, 3 (2.72%) thyroid disease and 1 (0.91%) diabetic, Down syndrome, psoriasis respectively. Our finding suggests thyroid disease in 3 (2.72%) patients was slightly higher than studies by Sharma VK *et al.*<sup>17</sup> They found thyroid disorder in 1% of patients. Tan E *et al.*<sup>18</sup> study thyroid disease was present in 2.3% patients.

**Conclusion**

Majority of patients were associated with atopy

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