Original Research Article

Study of clinical profile in patients with alopecia Areata at a tertiary care hospital

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Abstract

Background: Alopecia areata is an asymptomatic loss of hair in small circumscribed patches, which may remain discrete or may expand into total loss of the scalp hair and even body hairs. It is the second-most frequent cause of non-scarring alopecia, after androgenetic alopecia. The diagnosis is mostly clinical and does not cause difficulty many times. Present study was aimed to study clinical profile of alopecia areata patients at our tertiary care hospital. **Material and Methods:** This prospective, observational study was conducted in the department of dermatology in (outpatient department) OPD of our hospital. Patients diagnosed or suspected cases of alopecia areata were included **Results:** A total of 220 patients were included in the present study. Most common age group in our study was 21-30 years with 91patients (41.36%). Out of the total of 220 patients, 124 (56.36 %) were male and 96 (43.64 %) were female patients. The male: female ratio was 1.3:1. Patients with less than one month duration were 29.09 %. The most common group.74.55% patients had a single lesion and the rest 25.45 % had multiple lesions. Scalp was the most commonly involved area, followed by face. Area wise parietal region was the commonest area involved in 73 (33.18%) patients, followed by frontal region in 49(22.27%) patients. We noted patchy alopecia areata as the most common pattern in 169 (76.82%) patients followed by ophiasis pattern in 15 (6.82%) patients. We noted pitting nail changes in 12.73 % patients, no changes in 79.09 % patients. **Conclusion:** We noted younger age of onset in (21-40 years), with approximately equal incidence in both genders. Single patches, patchy pattern noted in our study.

Key Words: Alopecia areata; Hair loss;

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INTRODUCTION

Alopecia areata is an asymptomatic disorder of loss of hair in either small circumscribed patches, which may remain discrete or may expand into total loss of hair of the scalp and even body hairs. Alopecia areata has a reported incidence of 0.1– 0.2% with a lifetime risk of 1.7% with men and women being affected equally[1]. Indian study observed an incidence of 0.7% among new outpatients[2].It is the second-most frequent non-scarring alopecia, after androgenetic alopecia[3]. Alopecia areata is an autoimmune and inflammatory disorder of the hair follicle, which is characterized by non-scarring alopecia. Various hypotheses for alopecia areata have been proposed, such as infection, a tropho-neurotic hypothesis (based on the association between the time of onset of alopecia areata with emotional or physical stress and / or trauma), thallium acetate poisoning (owing to a similar clinical presentation), thyroid disease and in other hormonal fluctuations (for example in pregnancy or menopause)[4]. Inflammation of the hair follicles in alopecia areata mediated by leukocytes, as well as involvement of the immune system in the pathogenesis of alopecia areata has been recognized as the primary underlying cause since the late 1950s, but the exact pathology has yet to be discovered[5].Alopecia areata commonly seen as sudden onset of localized, single or multiple, well-demarcated patches of hair loss, most commonly affecting scalp, which may progress circumferentially. Typically the surface of AA patch is smooth and normal skin color without any skin alterations

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like scaling and follicular changes. Rarely it can be peachy or red[6].Characteristic 'exclamatory mark hairs' are seen either within or at the border of the patches. These are fractured and short hairs with proximal tapering close to the scalp and distal thickening and widening[7]. The presence of exclamatory hairs at the border and the hair pull test with 6 or more hairs from the periphery suggests that the patch may be active and progressive. Shuster described coudability hairs (A kink in the normal looking hairs, at a distance of 5-10 mm above the surface, when the hair was bent inwards) in patchy alopecia areata[8].Initially white hairs are spared, involving only pigmented hair and causing sudden whitening of hair (canites subita); however in chronic cases the white hair is also lost[9]. Alopecia areata is associated with several concurrent diseases (co-morbidities) including depression, anxiety, and several autoimmune diseases including thyroid disease (hyperthyroidism, hypothyroidism, goiter and thyroiditis), lupus erythematosus, vitiligo, psoriasis, rheumatoid arthritis and inflammatory bowel disease[10,11].The diagnosis is mostly clinical and does not cause difficulty many times. Dermoscopy is useful in doubtful cases. Present study was aimed to study clinical profile of alopecia areata patients at our tertiary care hospital.

MATERIAL AND METHODS

This prospective, observational study was conducted in the department of dermatology, Mahavir medical college and general hospital, Vikarabad, Telangana from March 2019 to July 2019. Patients coming to (outpatient department) OPD were included for this study. Local institutional ethical committee approval was taken for this study.

Inclusion criteria

1. Patients with hair loss either patchy or diffuse with smooth bald surface and having no features of scarring, scaling or inflammation were included.
2. Already diagnosed or suspected cases of alopecia areata visiting or referred to our hospital.

Exclusion Criteria

1. Patients with various types of alopecia, other than alopecia areata. For e.g. Cicatricial alopecia, congenital alopecia, drug induced alopecia, trichotillomania, alopecia in secondary syphilis, etc
2. Patients not willing to give written or informed consent and not willing to participate in the study.

Written informed consent was obtained from the patients prior to participation. Patients underwent detailed history taking including demographic data, personal history, family history, present and past medical history, drug history, history was taken to rule out associated systemic and dermatological disorders and various autoimmune disorders. During clinical evaluation clinical pattern, number, extent of lesion, severity and duration of alopecia areata, any underlying disease/pathological factors, nail changes, other organ system involvement and presence of other dermatological disorders were noted. Nail changes were documented in all patients. Lab investigations such as complete blood picture, ESR, complete urine examination, random blood sugar, blood urea, serum creatinine, thyroid function tests were done when needed. Histopathology of alopecia areata were studied in selected patients. The data was analyzed statistically using descriptive statistics.

RESULTS

After applying inclusion and exclusion criteria, a total of 220 patients were included in the present study. Most common age group in our study was 21-30 years with 91 (41.36%) patients, followed by 31-40 years age group with 57 (25.91 %)patients. Present study has 124 (56.36 %) male and 96 (43.64 %) female patients. The male: female ratio being 1.3:1.

Table 1: Age and gender wise distribution

Age (years)	Male	%	Female	%	Total	%
< 10	8	3.64	5	2.27	13	5.91
11-20	14	6.34	21	9.54	35	15.91
21-30	58	26.36	33	15	91	41.36
31-40	27	12.27	30	13.64	57	25.91
41-50	13	5.91	5	2.27	18	8.18
51-60	3	1.36	1	0.45	4	1.82
>61	1	0.45	1	0.45	2	0.91
Total	**124**	**56.36**	**96**	**43.64**	**220**	**100**

Patients with less than one-month duration were 64 (29.09 %) being the most common group, while more than 6-month duration were least with 41 (18.64 %).

Table 2: Duration of disease

Duration of disease	No. of cases	Percentage
<1 Month	64	29.09
1-3 Months	60	27.27
4-6 Months	55	25
>6months	41	18.64
Total	**220**	**100**

Patients with single lesion were 164 (74.55%), and the rest 56 (25.45 %) had multiple lesions.

Table 3: Number of Lesions

Number of Lesions	No of Cases	Percentage
Single	164	74.55
Multiple	56	25.45
Total	**220**	**100**

Grossly scalp area was the most commonly involved, followed by face. Area wise distribution of scalp was parietal region being the commonest area involved in 73 (33.18%) patients, followed by frontal region in 49(22.27%) patients. Beard (20.91%), occipital (18.18%), temporal (10 %), moustache (10 %), eyebrows (9.55%), eyelashes (2.73%), and other body parts (0.45 %) were also noted.

Table 4: Distribution of alopecia areata

Area of involvement	No. of patients	%
Parietal	73	33.18%
Frontal	49	22.27%
Beard	46	20.91%
Occipital	40	18.18%
Temporal	22	10%
Moustache	22	10%
Eyebrows	21	9.55%
Eyelashes	6	2.73%
Other body parts	1	0.45%

We noted patchy alopecia areata as the most common pattern in 169 (76.82%) patients followed by ophiasis pattern (bandlike alopecia areata along the posterior occipital and temporal margins) in 15 (6.82%) patients. Rest were reticulate, universalis[7] (total body hair is involved), diffuse, totalis (involving the entire scalp and body hair such as eyebrows, eyelashes, beard, axillary hair and pubic hair) patterns were noted in 5.45 %, 5.45 %, 3.62 %, 1.82 % patients respectively. We did not note Sisaphio (alopecia involving the frontal, temporal, and parietal scalp but spares hair along the scalp periphery, mimicking androgenic alopecia) pattern in our study.

Table 5: Pattern of alopecia areata.

Pattern	Frequency	Percentage (%)
Patchy	Were 169	76.82
Ophiasis	15	6.82
Reticulate	12	5.45
Universalis	12	5.45
Diffuse	8	3.62
Totalis	4	1.82
Sisaphio	0	0

We noted pitting nail changes in 28 (12.73%) patients and no changes in 174 (79.09%) of the patients.

Table 6: Distribution of nail changes

Nail changes	Frequency	% of patients
Pitting	28	12.73
Leukonychia	16	7.27
nail dystrophy	2	0.91
No involvement	174	79.09

DISCUSSION

Alopecia areata is a common, sudden onset, unpredictable, immune mediated, non-scarring form of hair loss. Though it is not associated with morbid complications, but cosmetic disturbance gained it a considerable importance. Out of 220 patients, 67.25 % patients in our study were between 21-40 years age group. Mean age in our study was 27.43 years. Male to female ratio was 1.3:1 in our study. Other Indian study had 52.1 % male patients, common age group were 21-40 years age group and male to female ratio being 1.7: 1[12]. Our findings are comparable with this study and other studies[13].Other studies had 74 % male patients, male to female ratio being 2.8:1 which are different than our study[14].Alopecia areata starts as a single initial patch and subsequent process is variable, as the initial patch may re-grow within a few months. Many further patches may appear after an interval of 3-6 weeks and then in a cyclical fashion these intervals are of varying duration[15].Patients with less than one-month duration were 29.09 % as the most common group, while more than 6-month duration were the least with 18.64 %. Cyclical appearance, period of remission, cosmetic disturbance, etc. are causes that brings patients to the OPD earlier, and many patients tend to neglect early or seek treatment from general practitioner or over the counter medications, but as lesion increases finally, they come for specialist consultation.Out of the total 220 patients 74.55% patients had single lesion and the rest 25.45 % had multiple lesions. Untreated, long duration disease are associated with factors such as diabetes mellites, stress factors, etc. Parietal region was the commonest area involved in 73 (33.18%) patients, followed by frontal region in 49(22.27%) patients. Maryam *et al*[16], reported occipital and temporal regions of scalp which were commonly involved areas in their study. We noted patchy alopecia areata as the most common pattern in 169 (76.82%) patients followed by ophiasis pattern in 15 (6.82%) patients. In 5-10% of patchy alopecia areata may progress to alopecia totalis/ alopecia universalis. If alopecia areata develops before puberty, the risk of alopecia totalis is 50% and in older individuals, the risk is about 25%[16]. Different researchers have shown very high percentage of severe forms of disease[17]. We noted pitting nail changes in 12.73 % patients. Studies have described nail changes in 7–66% of patients with alopecia areata[6,18]. Sharma *et al; noted* nail changes in 30 % of patients and changes were more common in the patients with extensive alopecia[2].The treatment options for alopecia areata are diverse, and the treatment options are based on the age of the patient and the extent of disease.

CONCLUSION

We noted younger age of onset (21-40 years), approximate equal incidence in both genders, single patches, patchy pattern in our study. So, most patients if reported early can be treated earlier and further spread of the disease can be limited.

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