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Original Research

Assessment of cases of Alopecia Areata using dermascope

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***ABSTRACT*:**
Background: AA is an autoimmune condition that attacks the hair follicles, causing nonscarring hair loss. The present study was conducted to assess cases of Alopecia Areata (AA). **Materials & Methods:** 82 cases of Alopecia areata were recorded. The site was selected and lesion was observed through the dermascope. Grading was performed and hair loss was recorded. Nail abnormalities were also recorded. **Results:** Out of 82, males were 42 and females were 40. Dermascopic findings were vallus hair in 25, yellow dots in 22, black dots in 15, broken hair in 12 and exclamation mark in 8 patients. The difference was significant (P< 0.05). Hair loss grade S1 was seen in 4, S2 in 10, S3 in 12, S4 in 25 and S5 in 31 patients. Nail pitting was observed in 4, trachyonychia in10, beau's lines in 3, Onychorrhexis in12 and koilonychias in 7 patients. The difference was significant (P< 0.05). **Conclusion:** Most common dermascopic findings were vallus hair and yellow dots and nail finding was, trachyonychia and Onychorrhexis.
Key words: Alopecia areata, Vallus hair, Yellow dots.

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INTRODUCTION

AA is an autoimmune condition that attacks the hair follicles, causing nonscarring hair loss. Population studies from the Rochester Epidemiology Project estimate a lifetime incidence of AA of 2.1%, in a population in Olmsted County, Minnesota, with no difference in incidence between genders.[1] A systemic review of the epidemiology of AA indicated a similar worldwide lifetime incidence of around 2%. Some smaller studies indicate a slight female-to-male gender bias, but this may be due to higher female concern regarding hair loss and subsequent treatment.[2] There appears to be no significant difference in the incidence of AA between males and females as both formal population studies found none, and hospital-based studies are mixed in citing a female vs male predominance. It is one of the most common forms of hair loss seen by dermatologists and accounts for 25% of all the alopecia cases.[3] AA accounts for 2-3% of all new outpatient attendance in dermatology services. It is common throughout the world and has been estimated to affect between 0.2% and 2% of the US population. The incidence of AA in the general population is unknown but is less than 1%.[4] At any given time 0.16%-0.2% of the population has AA; approximately 1.7% of the population will experience an episode of AA during their lifetime. Dermoscopy is a non-invasive diagnostic procedure used increasingly in dermatological practice not only for evaluation of pigmented skin lesions but also for hair disorders.[5] The present study was conducted to assess cases of Alopecia Areata (AA).

MATERIALS & METHODS

The present study comprised of 82 cases of Alopecia areata of both genders. All were informed regarding the study and written consent was obtained.

Data such as name, age, gender etc. was recorded. A thorough clinical history was obtained followed by general physical examination, systemic examination and mucocutaneous examination. The site was selected and lesion was observed through the dermascope. Grading was performed and hair loss was recorded. Nail abnormalities were also recorded. Results thus obtained were clubbed and entered in MS excel sheet for statistical inference. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 82		
Gender	**Males**	**Females**
Number	40	42

Table I shows that out of 82, males were 42 and females were 40.

Table II Recording of dermascopic findings

Dermascopic findings	Number	P value
Vallus hair	25	0.13
Yellow dots	22	
Black dots	15	
Broken hair	12	
Exclamation mark	8	

Table II, graph I shows that dermascopic findings were vallus hair in 25, yellow dots in 22, black dots in 15, broken hair in 12 and exclamation mark in 8 patients. The difference was significant (P< 0.05).

Graph I Recording of dermascopic findings

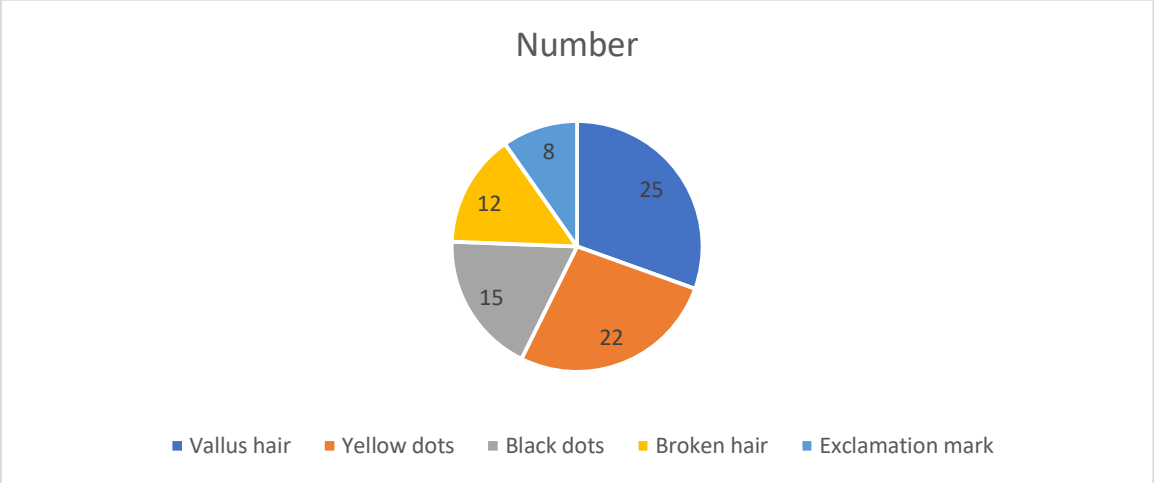


Table III Assessment of hair loss

Grading	Number	P value
S1	4	0.02
S2	10	
S3	12	
S4	25	
S5	31	

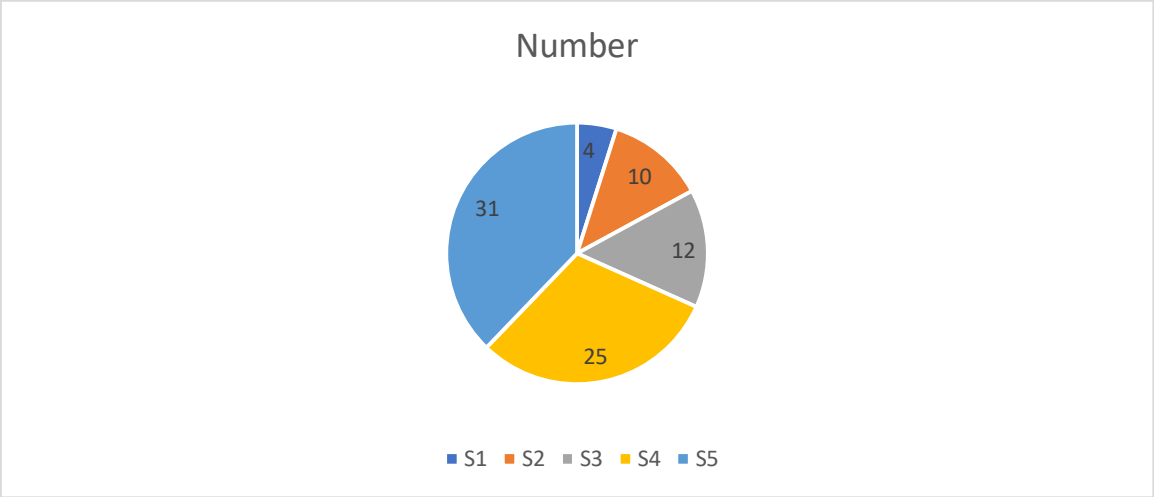
Table III shows hair loss grade S1 was seen in 4, S2 in 10, S3 in 12, S4 in 25 and S5 in 31 patients. The difference was significant (P< 0.05).

Table IV Nail abnormalities

Nail abnormalities	Number	P value
Nail pitting	4	0.01
Trachyonychia	10	
Beau's lines	3	
Onychorrhexis	12	
Koilonychias	7	

Table IV shows that nail pitting was observed in 4, trachyonychia in10, beau's lines in 3, Onychorrhexis in 12 and koilonychias in 7 patients. The difference was significant (P< 0.05).

Graph II Assessment of hair loss



DISCUSSION

AA typically presents as smooth, sharply demarcated, round patches of hair loss without atrophy with "exclamation point hairs" observed on the periphery of the patches.[6] Special designations of the disease include alopecia universalis (AU) (total body hair loss), alopecia totalis (AT) (total scalp hair loss) or alopecia in an ophiasis pattern (band-like hair loss on the temporal and occipital scalp).[7] Less common variants include the diffuse variant with widespread thinning of hair across the scalp or the reticular pattern with recurrent hair loss in one area and spontaneous hair regrowth in another. Ophiasis inversus causes band-like hair loss in the frontoparietotemporal area.[8] The present study was conducted to assess cases of Alopecia Areata (AA).

In present study, out of 82, males were 42 and females were 40. We observed that dermascopic findings were vallus hair in 25, yellow dots in 22, black dots in 15, broken hair in 12 and exclamation mark in 8 patients. Singh et al[9] found that out of 65 cases, males were 43 and females were 22. Grading of hair loss was S1 seen in 12, S2 in 6, S3 in 10, S4 in 13 and S5 in 24. The difference was significant (P< 0.05). Dermoscopic findings in patients were yellow dots in 20, vellus hair in 15, black dots in 14, exclamation mark in 6 and broken hairs in 2. The difference was significant (P< 0.05).

We observed that hair loss grade S1 was seen in 4, S2 in 10, S3 in 12, S4 in 25 and S5 in 31 patients. The nail pitting was observed in 4, trachyonychia in10, beau's lines in 3, Onychorrhexis in12 and koilonychias in 7 patients. Bapu et al[10] found that the most common dermoscopic findings were yellow dots (84.1%), vellus hairs (62.6%), black dots (48.4%), exclamation mark (30.9%), and broken hair (9.5%), in decreasing order. Furthermore, the most common dermoscopic findings in patients on diphencyprone were vellus hairs and yellow dots. Yellow dots and vellus hairs were most common in patients with alopecia universalis. However, broken hairs and exclamation mark hairs were mostly observed in patchy multiple AA patients. Yellow dots and exclamation mark hairs were also significantly more common in patients with positive pull test. Furthermore, vellus hairs were more common in patients with remitting disease pattern. With regard to scalp severity, yellow dots related positively, while vellus hairs, broken hairs, and exclamation mark hairs related negatively with severity of disease.

Environmental factors likely exacerbate or induce AA. Stress is an often-cited cause of AA, but the literature from human studies is inconclusive. However, in a mouse model, the activity of the central and peripheral hypothalamus pituitary adrenal axis was higher compared to normal mice. The elevated adrenocorticotropic hormone, corticosterone, and estradiol correlated to elevated pro-inflammatory cytokine levels in the skin, suggesting a potential role of psychological and physiological stressors to cause AA.[11] Other potential environmental stressors that may be implicated in AA include infections, vaccinations, hormone fluctuations, and diet, although their exact impact is unknown. Androgenetic alopecia or alopecia areata may exist in the family, but cicatricial alopecias rarely occur in family members (except Central Centrifugal Cicatricial Alopecia). In a personal study, 57% of the patients with female pattern hair loss had a positive family history: the mother in 29% of the cases, the father in 21% of the situations. Race of the patient is also important. For example, central centrifugal cicatricial alopecia occurs in black women, resembling lichen planopilaris.[12] Dissecting cellulitis of the scalp is frequent mostly in black adolescents and adult males.

The limitation of the study is small sample size.

CONCLUSION

Authors found that most common dermascopic findings were vallus hair and yellow dots and nail finding was, trachyonychia and Onychorrhexis.

REFERENCES

1. Mubki T, Rudnicka L, Olszewska M, Shapiro J. Evaluation and diagnosis of the hair loss patient: Part I. History and clinical examination. J Am Acad Dermatol. 2014;71:415.e1–415.e15.
2. Hordinsky M, Ericson M. Autoimmunity: Alopecia areata. J Investig Dermatol Symp Proc. 2004;9:73–8.
3. Mane M, Nath AK, Thappa DM. Utility of dermoscopy in alopecia areata. Indian J Dermatol. 2011;56:407–11.
4. Yoon TY, Lee DY, Kim YJ, Lee JY, Kim MK. Diagnostic usefulness of a peribulbar eosinophilic infiltrate in alopecia areata. JAMA Dermatol. 2014;150:952–6.
5. Alkhalifah A, Alsantali A, Wang E, McElwee KJ, Shapiro J. Alopecia areata update: Part I. Clinical picture, histopathology, and pathogenesis. J Am Acad Dermatol. 2010;62:177–88.
6. Hordinsky M, Ericson M. Autoimmunity: Alopecia areata. J Investig Dermatol Symp Proc. 2004;9:73–8.
7. Villasante Fricke AC, Miteva M. Epidemiology and burden of alopecia areata: A systematic review. Clin Cosmet Investig Dermatol. 2015;8:397–403.
8. Lundin M, Chawa S, Sachdev A, Bhanusali D, Seiffert-Sinha K, Sinha AA, et al. Gender differences in alopecia areata. J Drugs Dermatol. 2014;13:409–13.
9. Singh N, Gera V. A Dermascopy study of cases of Alopecia areata. J Adv Med Dent Scie Res 2019;7(5): 80-82.
10. Bapu NG, Chandrashekar L, Munisamy M, Thappa DM, Mohanan S. Dermoscopic findings of alopecia areata in dark skinned individuals: An analysis of 116 cases. Int J Trichology 2014;6:156-9.
11. Gupta MA, Gupta AK, Watteel GN. Stress and alopecia areata: A psychodermatologic study. Acta Derm Venereol. 1997;77:296–8.
12. Brajac I, Tkalcic M, Dragojević DM, Gruber F. Roles of stress, stress perception and trait-anxiety in the onset and course of alopecia areata. J Dermatol. 2003;30:871–8.
13. Rodriguez TA, Duvic M. National Alopecia Areata Registry. Onset of alopecia areata after Epstein-Barr virus infectious mononucleosis. J Am Acad Dermatol. 2008;59:137–9.