Alopacia areata among patients attending the department of dermatology and venereology in Rizgary Teaching Hospital in Erbil

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Abstract

Background and objective: Alopecia areata, is an organ-specific autoimmune disease with genetic predisposition and an environmental trigger, characterized by discrete, well - demarcated area of non scaring terminal hair loss. It affects sex, children and young adults. This study aims at assessing different aspects of alopecia areata and its clinical characteristics.

Methods: A descriptive study conducted during October 2006 and April 2007 on 100 patients with alopecia areata using a structured questionnaire, at the outpatient clinic of Dermatology and Venereology at Rizgary Teaching Hospital.

Results: Male-to-female ratio was 2.3:1, 42% of cases had a single patchy lesion while 52% had multiple patchy lesions, 5% had Alopecia Universalis and one case had Alopecia Totalis. The scalp was involved in 82% while mustache area in only 7% of the cases. Itching and burning were positive in 8%, exclamation marks in 23% and nail involvement in 22% of cases. Ophiasis found in 13% while past history of atopy was positive only in 11% of the cases. Family history was positive in 20% of all cases while past personal history in 31% of the cases. The age of first attack in most of cases was during the first three decades of life.

Conclusion: There is a significant relationship between the age of first attack and negative prognostic signs. Scalp with multiple patchy lesions was the common type of alopecia areata among our patients.

Keywords: Alopacia Areata, Erbil, Rizgary hospital.

Introduction

Alopecia areata (AA) is a common chronic inflammatory disorder of the hair [1], characterized by discrete, well-demarcated areas of non-scarring terminal hair loss [2]. At any given time, approximately 0.2% of the population has AA [3]. AA may occur on any hair-bearing region [4]. Although alopecia is commonly seen on the scalp, it may occur only on other body sites or on several different sites[5]. Alopecia totalis (AT) refers to the total absence of terminal scalp hair while alopecia universalis (AU) refer to the total loss of terminal body and scalp hair. Ophiasis refers to a band like pattern of hair loss over the periphery of the scalp. Hair loss may also be diffused, mimicking anagen effluvium [6]. Characteristic hairs, known as "exclamation point hairs," may be seen within or around the areas of alopecia. The hairs are tapered toward the scalp end with thickening at the distal end [7]. Some patients may first present with nail abnormalities such as pitting, thinning nail plates, and nail ridging [4]. Histological examination shows a peribulbar lymphocytic infiltrate resembles a "swarm of bees" scarring is characteristically absent [8]. A family history positive for AA in more than one member can be obtained in at least 20% of patients [9].There is an increased

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incidence of autoimmune disease in patients with AA, particularly vitiligo and thyroid related diseases, namely Hashimoto's thyroiditis and Graves' disease, and there is higher prevalence of pigmentary defect in patient with AA [10]. Several studies have reported an association between AA and atopic disease and have suggested that AA in atopic subjects have an earlier age of onset and is more sever than in non-atopic subject. Emotional Stress seems to play an important role in the onset and aggravation of alopecia aerate [11]. No cure or preventive treatment for AA has been established, thus treatments are directed toward halting disease activity [12]. The aim of this study is to review the pattern and clinical characteristics of AA patients attending the Department of Dermatology and Venereology in Rizgary Teaching Hospital and to provide a background for further studies in the same field.

Methods

A descriptive, case series hospital-based study was conducted in the out patient Department of Dermatology and Venereology in Rizgary Teaching Hospital, during October- 2006 to April- 2007. Hundred patients with AA were taken, all ages and both sex were included in the study.The diagnosis of AA was made on clinical basis. A detailed history was taken from each patient regarding the following points; age, gender, duration of the disease, symptoms (any pain, or itching), history of atopy, history of previous infection, history of any stressful events, previous personal history, family history of the same problem and consanguinity.Thorough physical examination was performed for each patient and for each lesion we recorded site, size, exclamation mark hair,ophiasis,sisiapho,presence of redness,scaling, atrophy, nail involvement (pitting, ridging, solitary nail involvement, cross fissure, Beus line, transverse line of uniform pit, and gross and nail dystrophy.Data were statistically analyzed and organized in tables and graphs. SPSS (statistical package for social sciences), version (11.5) was used to analyze the data, Chi square test was used to make a correlation between different variables. P-value of less than 0.05 was considered as statistically significant. Excel Microsoft word was used for arranging the tables and figures.

Results

During the six months period of the study we recruited 100 patients with AA who attended the Department of Dermatology and venereology in Rizgary Teaching Hospital. Of these 100 patients, 70 patients were male (70%) and 30 were female (30%). The ages of our patients were divided into six groups starting from the 1st group of less than 10 years old to the last one of older than 50 years. The younger patient was 18 months old, and the older one was 50 years old, as shown in Table 1.

Table 1: Frequency in Relation to Age Groups

Age	Frequency	Percent	Cum Percent
<10	28	28	28
10-19	21	21	49
20-29	31	31	80
30-39	13	13	93
40-49	6	6	99
≥50	1	1	100
Total	100	100	

Out of the 100 patients with AA, 42 patients (42%) had a single patchy lesion, 52 patients (52%) had multiple patchy lesions. one patient had AT and 5 patients had AU. regarding the site and size of the lesion, it was found that the scalp area was more commonly involved (82 patients). The size of scalp patches ranged from (< 2cm²) in 15 cases, (2-5cm²) in 44 case and (> 5cm²) in 23 cases. The second frequent site of involvement was the beard area (21 cases) for which the patches' size ranges from (< 2cm²) in 11 patients, (2-5 cm²) in 4 patients and (> 5cm²) in 6 patients. The third site was the extremities (15 patients), (2-5 cm²) in 4 cases and (> 5 cm²) in 11 cases. The next site is the eye brow 13 cases, (< 2cm²) in 4 cases, (2-5 cm²) in 4 cases and (> 5 cm²) in 5 cases. Later on the trunk comes with 9 cases, (2-5 cm²) only in one case and (> 5 cm²) in 8 patients. Eye lash was the next, 8 cases, (< 2cm²) in 3 cases, and (> 5cm²) in 5 cases. Finally mustache area was the least common site of involvement, 7 patients, (< 2 cm²) in 2 cases and (> 5cm²) in 5 cases. With regard to the associated signs and symptoms, 8 patients (8%) were suffering from itching and burning sensation, 2 patients (2%) have redness while scaling was found only in one patient. A very wide range of duration was observed which was divided into 4 different periods of time. The highest frequency of cases lies in the fist period group (<12 weeks). The Exclamation mark which is regarded as an important patho-gnomonic diagnostic feature was positive only in 23% of cases. Nail changes which indicates a negative prognostic sign was positive in 22% of cases, 15% of cases were suffering from ridging and 7% from pitting. Another important negative prognostic point is the presence of ophiasis which was positive in 13% of cases. The history of atopy which was positive in 11% of cases, history of emotional stress was positive in 29% of cases and the history of infection was positive in only 9% of cases. The past personal history was positive in 31% of cases, while positive family history found in 20% of cases. Different percentages of the above variables are shown in figure (1).

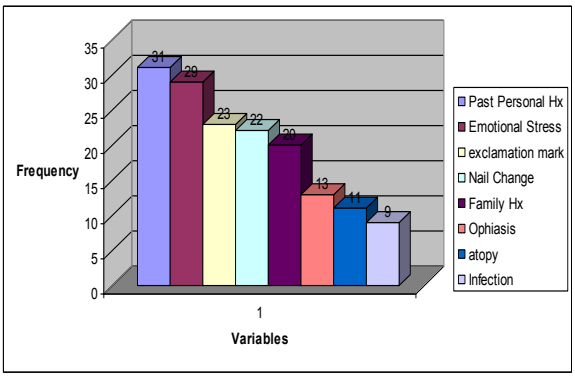

Figure 1: Frequency of the certain Variables

Age at first attack was estimated and found to be mainly within the first 30 years of life, 30 cases <10 year, 23 cases within 10-19 years, and 32 cases within 20-29 years, 12 cases were within 30-39 year, and 3 cases within 40-49 year. Figure 2, show the relation between the age at first attack and the presence of nail changes and ophiasis as increase in the frequencies in the first age group was observed.

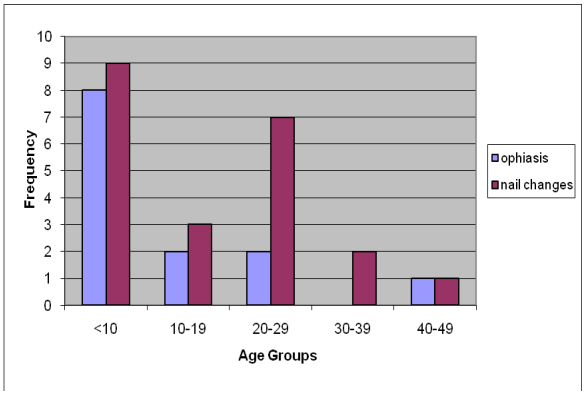

Figure 2: Age of first attack in relation to ophiasis and nail changes.

Significant relation found between age at first attack and history of atopy, the association was obvious in the first three decade of life as shown in Table2.

Table 2: Age at first attack in relation to atopy

Age at first attack	Atopy		Total
	Negative	Positive	
<10	25	5	30
10-19	20	3	23
20-29	30	2	32
30-39	11	1	12
40-49	3	0	3
Total	89	11	100

Discussion

AA has different incidence in different racial groups and geographical areas of the world, it is estimated to be 0.5-1% of the general population [13]. The 100 patients with AA who were included in the study comprised 1.56% of the dermatological patients attending the department during the period of the study. Data concerning the gender ratio for AA vary slightly in the literature. In one study including 736 patients, a male to female ratio of 1:1 was reported. In another study on a smaller number of patients, a slight female preponderance was seen [14]. In this study, male to female ratio was 2.34/1. the number of female cases in comparison to other recorded data is low since the male to female ratio in China was 1.1/1 [15], however our ratio is closer to the male to female ratio recorded in Iran (Kerman city) which was 2.6/1 [16] and 2/1 is the ratio recorded in the study done on Tehrani patients [17]. Another local Iraqi study shows closer male to female ratio (3.17/1) [18]. Although causes of increasing male to female ratio in our study are not known, this might be attributed to the physiologic lack of hair in beard and mustache in females in comparison to males. Furthermore, the short scalp hair in males compared to most of the female patients lead to early detection of the lesion and hence early referral to the dermatologists. In addition, a lower rate in female can be due to social stigma leading to avoidance of seeking medical treatment .Several variants of alopecia could occur, each with different features. In our study 42% of cases were suffering from single patchy AA and 52% had multiple patchy AA. The ratio of extensive alopecia (AT 1% and AU 5%) is less when compared to another study done in Kuwait in which severe and extensive disease (AT/AU) has been reported in 13% of cases [19]. However, our ratio was close to a ratio reported in an Iraqi study were the proportion of single patches cases was 45% and the multiple patches cases was 55% [18].There was a good relation between the extensive type of alopecia and the age of first attack, since the onset of the only reported case of AT and most of cases of AU (4 of 5) were found to be in the first three decades of life. A similar result was reported in a study in China in which AU occurred in 14 out of 15 cases of the early onset group but only one case in the late-onset group [15]. Patchy AA most often affect the scalp, (66.8-95%) [14]. similar percentage was reported in a study done in Kuwait (96.3%) [19] which is close to our reported scalp involvement rating at 82% of cases followed by beard area in 21% of cases. The presence of exclamation mark is pathognomonic but not always found. It was positive only in 23% of our cases. This is low compared to 46% of cases reported in another study conducted in Iraq [18].AA most often is asymptomatic, but some patients (14%) experience a burning sensation or pruritus in the affected area [14]. This figure was close to our reported figure, since 11% of patients had skin changes varying from 8% with itching and burning sensation, 2% with erythema during physical examination and 1% with scaling. These finding suggest that the alteration in the peripheral nerves system and vasculature might be one of the possible etiological factors. Ophiasis, characterized by a band like pattern of hair loss involving the back and sides of the scalp. This characteristic pattern was found in 13% of patients which higher than the reported figure

of 2.3% in Singapore study [20]. AA produces nail changes, different percentages had been reported by varies literatures with an overall incidence of 10-60% [21]. In our study, 22% of cases had nail changes with the characteristic uniform, shallow pitting being the commonest change followed by ridging (15%) and (7%) for pitting. This may be explained by other possible causes of ridging such as trauma. These results was not consistent with the Iraqi study which reported nail pitting in 58.6% and nail ridging in 3.5% of the patients [18].The etiology of AA remains unclear. There are many theories regarding the genetic factors being an important component. Therefore, information about family history is mandatory which was positive in 20% of cases in our study. Data about positive family history ranged from as low as 3% to as high as 42% of cases [22] which are similar to those reported in the Iraqi study (27.9%) [18]. Our reported figure in this regard might be questionable due to poor reliability of taking family history, as many of our patients don not have accurate information about other affected cases in their far family relatives. Stress and personality characteristics of patients regarded as one of the etiopathological factor for AA, either as a primary precipitating factor or as a consequence of the disease itself which creates the emotional, social and occupational problems as well as affecting self-image and relationships with others. History of emotional stress was found to be positive in 29% of cases and no significant relation to gender was observed, while (68.88%) of cases identified stressful events in a study in the dermatological department of Cetatea Histria Polyclinic in Bucharest [12]. Another local study conducted in Basrah city found 62.2% of the cases to have history of stressful events preceding their disease onset[23]. The association with atopy , which was positive only in 11% of cases, was found to have a significant relationship with the age at first attack, 5 and 3 cases in (<10 years) and (10-19 years) respectively as shown in Table 2.

This finding was close to the incidence of atopy among AA cases in Japan, 10% in which the onset of the disease has usually been in childhood and the average duration of the disease was more than 10 years[14]. Some of the literature defines AA as a recurrent disease since the start, so we expected to collect a good percentage of positive past personal history; this was reported only in 31% of cases. Similarly 24% of cases in Baghdad study had positive past personal history[18]. The bad prognostic signs of AA which include early age of onset has been found to have a significant relationship with other bad prognostic signs like nail changes, association with atopy, ophiasis pattern and positive family history since most of these finding were reported in the early onset of the disease (<10 years of life).

Conclusion

The proportion of alopecia areata patients in comparison to other dermatological patients attending our department is close to other previous studies, scalp was the commonest site of involvement, and the multiple patchy type was the commonest type. A significant relationship was found between the age of first attack and bad prognostic sings.

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