Prevalence and treatment of *Alopecia areata* in Taif area, KSA

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**ABSTRACT**

**Background:** *Alopecia areata* (AA) is one type of hair loss that typically causes patches of baldness. In some cases, total baldness develops. There are no adequate studies concerning AA on the Taif area residents, KSA. **Aim:** The present study conducted for the first time prevalence, causes and treatment of AA in Al-Taif area, KSA. **Materials and Methods:** A questionnaire employed to determine the prevalence of AA in patients attending dermatology clinics in Al-Taif area. The doctors questioned about the number of patients attend dermatology clinics and suffering from AA. Doctors also were asked about types, causes of AA and the treatment/responsiveness. The data collected and analysed statistically. **Results:** The obtained results showed a noticeable prevalence of AA in Al-Taif area; 6.750% in males and 6.375% in females. Localized AA was the most common (88.75%) as well as the most responsive to the treatment. The emergence of disease was mostly related to the immune system (85%). The Doctors preferred topical corticosteroids or minoxidil plus systemic vitamins and minerals treatment more than others due to its effectiveness (90%, 40% responsiveness in localized and diffused respectively). **Conclusion:** We concluded that, the incidence of AA disease in Al-Taif area, exceeded expectations and the autoimmune condition is the most predominance reason for its occurrence. The most effective treatment was topical corticosteroids plus systemic vitamins and minerals. **Recommendations:** We recommend a vitamin-rich diet as well as an increased emphasis on the use of topical rubefacient herbs in addition to the above mentioned treatments of AA.

**Key words:** *Alopecia areata*, autoimmune, corticosteroids, minoxidil, prevalence, Saudi Arabia, taif, topical

**INTRODUCTION**

*Alopecia areata* (AA) is a condition in which hair is lost from some or all areas of the body, usually from the scalp. Commonly, AA involves hair loss in one or more round spots on the scalp. Hair may also be lost more diffusely over the whole scalp, in which case the condition is called diffuse AA.[1] The prognosis of AA is difficult to predict. Few studies report long-term follow-up of AA patients. The long-term evolution of AA and the possible relationship between disease severity and treatment response with long-term prognosis was assessed.[1] A total of 50 Iraqi male patients with frictional hair loss were studied.[2] The treatment depends on the size of the affected region. If the affected region is small, it is reasonable just to observe the progression of the illness, as the problem often spontaneously regresses and the hair may grow back. In cases of severe hair loss, limited success has been shown from treating AA with the corticosteroids clobetasol or fluocinonide, corticosteroid injections, or cream.

The prevalence and characteristics of unconventional therapies used by dermatology outpatients in Turkey were determined.[3] The current understanding of the use of non-pharmaceutical botanical products in the management of hair loss was evaluated.[4] A muscular needling combined with local injection in the treatment of AA was studied.[3] A 23-year-old man with an 18-month history of patch-type AA of his scalp has failed to respond to topical clobetasol propionate and tacrolimus ointments.[4] A case of an unusual adverse drug reaction to diphenylcyclopropenone for the treatment of alopecia areata was described.[7] AA is an autoimmune disease associated with other autoimmune diseases such as thyroid disorders, anaemia, and other skin disorders. A case of AA associated with Graves’ disease in a 41-year-old woman who had previously been...
diagnosed with Hashimoto’s disease was reported. The effectiveness of topical crude onion juice in the treatment of patchy AA in comparison with tap water was tested. AA and Vitiligo—Partners in Crime or a Case of False Alibis, a correlation between AA and vitiligo was studied. Three cases of AA treated with Scalp Roller therapy, which were resistance to both systemic and topical treatment for inducing hair on cosmetic region like scalp were reported. A total of 481 North-American Caucasian AA patients (336 female, 145 male) were recruited to assess age of onset, autoimmune and atopic co-morbidity, nail involvement, family history of AA and autoimmune disease and disease subtype. Forty patients with AA and a 40-volunteer random age-sex matched control group were enrolled. The study is based on anxiety and Beck Depression Inventory (BDI) and the Eysenck Personality Questionnaire (EPQ). Analytical evaluation was done by Mann-Whitney, Kruskal Wallis, and t-tests. There are no adequate studies on the Taif area residents to determine the incidence, causes and suitable treatment of the disease. The present study was conducted for the first time. The present study aims to investigate the prevalence of AA in Al-Taif area, KSA in correspondence to the gender and type, the causes of the disease and the commonly used drugs for the treatment.

MATERIALS AND METHODS

The study was conducted on 800 male and 800 female who accustomed dermatologist clinics in Al-Taif area, KSA. The doctors will be questioned about the number of patients attend dermatology clinics and suffering from AA. They also were asked about types, causes of the disease, and the treatments/responsiveness. The data will be collected and analysed statistically. The data were compiled from eight government hospitals and private clinics (100 male/female patients each) on the basis of a questionnaire have been prepared by the supervisor and dermatologists. The collected data was analyzed by using SPSS program (Statistical Package for Social Sciences; version 16).

RESULTS

The prevalence of AA in both males and females was almost equal [Table 1]. The localized type of AA is the most common [Table 2].

The autoimmune condition is the most predominance reason for the occurrence of disease followed by psychological, genetic and others factors [Table 3].

The present study found that, the topical treatment is the most common among the others [Table 4]. In addition, the response rate to topical and topical + systemic is almost equal and the localized type was more responsive to treatment than diffused [Tables 5 and 6].

DISCUSSION

As a result of the negative psychological effect of the disease on patients, many researchers encouraged to study the disease
A case in whom the concomitant severe AA was noticed equal incidence of AA in both males (6.750%) and females (6.375%). AA is a non cicatricial alopecia with still unknown pathogenesis, but increasing evidence suggests that an immunologic process might be responsible for the disease. The study showed that, the main reason for the occurrence of AA disease related to the immune system, and this complies with the previously reported results suggested that: 1) An immunologic process, apparently carried out by CD4 + lymphocytes and by dendritic CD1a + and CD36 + cells, may play a key role at least in the early phase of the disease involving primarily microvessels and later on the bulbar area; 2) the expression of adhesion molecule receptors is involved at the beginning of the disease by mediating the adherence of CD4 + lymphocytes to endothelial cells and subsequent trafficking into the dermis. A case in whom the concomitant severe AA was associated with autoimmune thyroid disease and primary IgA deficiency—a quadruple complex which, to our knowledge, has never been previously described was reported. Other causes of AA were related to psychological (7.5%), genetic (3.75%) and other factors (3.75%) as some types of drugs. The study revealed the importance of the use of topical immunosuppressant drugs (70% frequency and 70% response rate) which agreed with recently reported data; various immunosuppressant drugs have been shown to induce hair growth in normal hair as well as in AA and androgenic alopecia; however, the responsible mechanism has not yet been fully elucidated. The influence of mycophenolate (MPA), an immunosuppressant, on the proliferation of human dermal papilla cells (hDPCs) and on the growth of human hair follicles following catagen induction with interferon (IFN)-γ was investigated. The use of both topical pharmaceutical products as corticosteroids or minoxidil plus systemic vitamins and minerals achieved the highest responsiveness in both localized (90%) and diffused (40%) types of AA. The use of topical corticosteroids or minoxidil alone recorded about 80% cure in localized AA. The study showed the extent of the importance of giving medications containing vitamins and minerals with topical medications and that increased significantly the response rate. The use of vitamins and minerals alone achieved the lowest responsiveness. Topical macrolide immunosuppressant, intralesional steroid injection and topical antiandrogen (dihydrotestosterone inhibitors) recorded about 70% cure. Some dermatological clinics preferred the treatment with Narrowband UVB Phototherapy (60% responsiveness). Systemic corticosteroids as triamcinolone acetonide suspension (Kenacort A injection) reported lowest frequency (10%) although they recorded 50% responsiveness due to their undesirable side effects. Topical rubefacients or salicylic acid + betamethasone achieved about 40% responsiveness.

### CONCLUSION

The study showed that the incidence of AA disease exceeded expectations and therefore it must be taken into our considerations. Prevalence of the disease between males and females are almost equal. The localized type of the disease is the most common and the most responsive to treatment. It is clear that the most important reasons for the emergence of disease-related to the immune system (a systemic autoimmune disorder). The present study revealed that the use of topical pharmaceutical products of steroids more than others due to its effectiveness.

### Recommendation

It is clear that there is no focus by the doctors on the need to pay attention to a vitamin-rich diet, and natural products characterised by scarcity side effects. We recommend a vitamin-rich diet as well as an increased emphasis on the use of topical rubefacient herbs in addition to the above mentioned treatments of AA. A good daily multivitamin containing zinc, biotin, vitamins B and D, folic acid, iron and calcium is a reasonable choice. Top 10 foods for healthy hair were required; salmon, dark green vegetables, beans, nuts, poultry, eggs, whole grains, oysters, low-fat dairy products and carrots.

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