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ALOPECIA AREATA AND TRICHOSCOPY: AN OBSERVATIONAL STUDY

Dermatology

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ABSTRACT

Background: Alopecia areata (AA) is a common type of non-scarring alopecia. Genetic predisposition, autoimmunity, and environmental factors play a major role in the etiopathogenesis of AA. Trichoscopy is a simple and a non invasive technique used to detect various types of scalp and hair disorders. It is a simple bed side test which avoids unnecessary biopsies, besides diagnosing the condition it also helps in determining the treatment response. **Aim and Objectives**: To determine the various trichoscopic findings in alopecia areata. **Materials and Methods:** 50 patients with clinically diagnosed alopecia areata were enrolled for the present study. Trichoscopy was done using a digital microscope system in both non polarized and polarized modes after obtaining written informed consent. **Results:** Most common trichoscopic finding was yellow dots seen in 86% followed by short vellus hairs seen in 76%, broken hair in 60% and black dots in 44% patients respectively.

KEYWORDS

Alopecia areata, trichoscopy

INTRODUCTION

Hair loss is the most common hair problem encountered these days in both males and females. Rapid diagnosis of the type of alopecia becomes challenging sometimes. Lidia Rudnicka and Malgorzata Olszewska coined the term "Trichoscopy" for dermoscopy of hair and the scalp.[1] Trichoscopy is a non-invasive technique, most commonly used for viewing various scalp and hair problems. AA is a common non cicatricial alopecia affecting 0.1-0.2 percent of general population.[2] It usually presents with well defined patches of hair loss. It can affect males and females of any age and in many cases a family history of AA itself or other autoimmune disorders is present. Trichoscopic findings in AA depend on disease activity, severity and duration of the disease. Black dots, dystrophic and fractured hair, exclamation mark hair (EMH) are the most specific findings in AA, which indicate strong disease activity while short re-growing hair indicate a better prognosis. Yellow dots may be observed in all stages of both acute and chronic alopecia areata.[3]

Materials and Methods

This study was conducted at a secondary health institute of North India from September 2019 to March 2020. Male and female patients aged more than 18years, clinically diagnosed with alopecia areata and who gave written informed consent were finally enrolled for the present study. Immunocompromised patients, pregnant and lactating females and those having cicatricial alopecia were excluded from the study. After taking detailed history, trichoscopy was done in the recruited patients using a Cooltec digital microscope.

Results

50 patients were enrolled in this study within a period of 6 months, out of which 38 were males and rest 12 were female patients. 90 % of patients belonged to age group 20 – 40 years with mean age of presentation as 33.83 years. 15% of patients had history of some other autoimmune disease. 60 % of patients were already taking medications either in form of topical application or some oral medication. Mean duration of illness was 7.5 months. 80 % patients had solitary lesion and rest 20 % had multiple lesions. Most common trichoscopic finding was yellow dots seen in 86% followed by short vellus hairs seen in 76%, broken hair in 60% and black dots in 44% patients respectively.

DISCUSSION

Alopecia areata is an autoimmune disorder which causes non scarring hair loss in hair-bearing areas. Trichoscopic findings of AA are characteristic. These include yellow dots, black dots, short vellus hairs, broken hairs, upright regrowing hairs and Pohl-Pinkus constrictions.[4] In this study, yellow dots were the most commonly seen finding which was consistent with study conducted by Ros et al and Chiramel et al where the incidence was 94% and 87.5% respectively. Yellow dots correspond to keratotic or sebum filled follicular infundibula and are characteristically seen in adullts as sebaceous glands become active after puberty.[5]

Short vellus hairs are a sensitive marker of hair re-growth. Their length is less than 10 mm and are hypopigmented and represent less than 10% of normal human scalp hairs but in AA their frequency may increase ranging from 30- 100 %. They are considered to be one of the most sensitive but not a specific marker of AA. Broken hairs are frequently seen in acute AA with active hair loss, which result from irregular breakage of the terminal diseased hair shaft or by rapid regrowth of incompletely destroyed hair that have previously formed black dots.[6]Black dots represent pigmented broken hair at scalp level. They also predominate in acute alopecia areata with active hair loss with incidence ranging from 0–84%. Their incidence is relatively higher in Asian as compared to Caucasians.[7]

CONCLUSION

Trichoscopy is a simple and non- invasive technique to diagnose AA, moreover it also helps in determining the severity of the condition, hence it should be recommended in all patients of alopecia areata.

Figure 1: Yellow dots, short vellus hairs and exclamation mark hairs

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