Annular Alopecia Areata: A Morphologically Rare Variant

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ABSTRACT

Alopecia areata (AA) is the most common form of nonscarring alopecia involving the scalp and/or body. The most common pattern of hair loss is oval or round, but newer morphological variants are increasingly being described. We hereby report two cases of annular pattern of AA due to its unusual morphology.

Key words: Alopecia, annular, hair loss, scalp

INTRODUCTION

Alopecia areata (AA) is an autoimmune disease of the hair follicle characterized by the appearance of nonscarring bald patches usually over the scalp but can affect any area of the body and can present at any age. It shows a great variety of shape and extent. It can present as a patchy, confluent, diffuse, linear, annular, rectangular, and polycyclic pattern.1-5 We hereby report two cases of AA presenting in an unusual annular pattern.

CASE REPORTS

Case 1

A 19-year-old male patient presented with chief complaint of asymptomatic loss of hair at the vertex of the scalp for 2 months. Hair loss was annular in pattern. There were multiple areas of patchy hair loss also distributed widely in the scalp. There was no history of similar illness in family members and also no history of drug intake and trauma. On examination, there was a well-defined annular patch of nonscarring alopecia of size 7 cm × 6 cm approximately present at the vertex of the scalp and multiple small patches of alopecia in the bilateral frontotemporal region and temporoparietal region with the presence of exclamation mark hair at the periphery of the lesion [Figure 1]. There was no associated skin, nail, or other body hair involvement. Systemic examination was within the normal limits. Potassium hydroxide (KOH) examination did not reveal any fungal hyphae. Histopathological examination of a tissue taken from the affected area confirmed the diagnosis of AA. He was given 10 mg/ml triamcinolone acetonide intralesional injections on two occasions with partial improvement and was subsequently lost to follow-up.

Case 2

A 42-year-old male patient presented with chief complaint of asymptomatic loss of hair from the occiput of the scalp for the past 3 months. The hair loss started as a small patch and gradually increased in size assuming an annular pattern.
His daughter also had a patch of alopecia over the frontal region of the scalp of 2-month duration. There was no history of topical, intralesional, or systemic medication for the hair loss. On examination, there was a single, smooth, and well-defined area of nonscarring alopecia of diameter 10 cm in an annular pattern present at the occipital region with sparing of white hair and the presence of exclamation mark hair at the periphery of the lesion. There was no associated skin, nail, or other body hair involvement. Systemic examination was within the normal limits. KOH examination of hair showed no fungal elements. Fungal culture with Sabouraud’s media at 4 weeks revealed no growth. Histopathological examination from the hairless region in scalp was consistent with AA. On the basis of clinical examination and histopathology, the diagnosis of annular AA was made. The patient was given intralesional injections of triamcinolone acetonide (10 mg/ml) every 3 weeks and showed partial improvement in the lesions after 3 months (four intralesional injections) of follow-up. Subsequently, the patient did not turn up for the injections.

**DISCUSSION**

AA manifests as localized, well-demarcated patches of hair loss with short easily extractable broken hair known as exclamation mark hair at the periphery of the patch. The extent can vary from a single patch of alopecia to alopecia universalis if the total body hair is involved. Usually, there is sparing of white hair in a patch of AA.

The most common presentation of AA is a patchy hair loss, but various patterns such as reticular, ophiasis, sisaipho, and diffuse alopecia have been described. Recently, certain unusual patterns of hair loss were reported including linear alopecia, annular pattern, rectangular pattern, and polycyclic pattern. The common patchy pattern is usually self-limiting and has a good prognosis, while ophiasic pattern is associated with a poor prognosis. Linear alopecic pattern represented a variant of biopsy-proven lupus profundus. The recently described rectangular pattern AA was found to be associated with malignancies such as diffuse large B-cell lymphoma, alveolar soft part sarcoma, and cavernous sinus arteriovenous fistula with embolization treatment. Polycyclic or targetoid pattern represented regrowth pattern due to the centrifugal accumulation of the corticosteroid resulting in an intermediate zone of normal healthy hair surrounded by an inner and outer zones of thin white hair and exclamation mark hair. Recognition of the pattern of alopecia thus may help in predicting the course and severity of the disease as well as associated conditions. The above reported cases represent a unique annular pattern which may be a marker of progression of the disease as the pattern may develop due to coalescence of individual multiple lesions or may develop by the extension of a single patch like in the ophiasic pattern. However, it needs to be differentiated from the usual hair recovery pattern in AA in which thin white hair emerges first, followed by pigmented terminal hair which then marginally expands from the core. Whereas in annular pattern, the core is preserved with thick terminal hair and the loss is peripheral.

Prognosis of AA is variable, ranging from self-resolution to recalcitrant and recurrent disease even with systemic therapy. In this case, there was partial improvement with treatment, and this pattern of alopecia may be a poor prognostic factor, but more cases need to be studied.

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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**Conflicts of interest**

There are no conflicts of interest.

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