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A CASE REPORT OF SHORT HAIR SYNDROME – LOOSE ANAGEN HAIR SYNDROME

Dermatology

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ABSTRACT

Loose anagen hair syndrome is an unusual hair condition clinically characterized by short, thin, fine, sparse and easily pluckable hair commonly affecting female children. It can have an autosomal dominant inheritance or can be acquired sporadically. We report the case of a 11-year-old female child with patchy hair loss over the vertex and occipital region clinically diagnosed as loose anagen hair syndrome.

KEYWORDS

Loose anagen hair syndrome, pluckable hair, short hair.

INTRODUCTION:

Loose anagen syndrome is an atypical hair condition clinically distinguished by easily pluckable hair from the scalp and that do not progress long [1]. It is encountered frequently between the age group of 2-6 years although adult-onset cases have been reported in literature, affecting both the sexes but with female predominance. It is often an underdiagnosed condition in male children due to the differences in hairstyle [2]. This condition was outlined in detail initially by Nodl and later by Zaun in the year 1986 [3].

Case Report:

A 11-year-old female child born out of non-consanguineous marriage was brought to our dermatology outpatient department with complaints of dry, lusterless, sparse and short hair on the scalp since the past 7 years. Mother gives a history that the child never needed a haircut and that the hair can be easily plucked out without any pain with combing or with minimal traction applied. She had normal developmental milestones.

There was no history of self-plucking of the hairs. Cutaneous examination revealed incomplete patchy hair loss over the vertex and occipital region with short, thin, fine, lusterless, dry and sparse hairs of varying length involving the whole scalp as shown in the figure-1, figure-2 and figure-3. The hair pull test was positive with more than ten hairs extractable. Nails, teeth, mucous membranes, skin and hair elsewhere were normal.

Her general physical examination and systemic examination were normal. All routine investigations such as blood counts and serum chemistry were within normal limits. Examination under light microscopy revealed misshapen bulbs of anagen hair with cuticles having ruffled appearance as shown in the figure-4. Based upon these findings a clinical diagnosis of loose anagen hair syndrome was made and parents were given reassurance about this condition.

Figure-1: Back view of the incomplete patchy hair loss over the vertex and occipital region.

Figure-2: Thin, dry and short hairs all over the scalp.

Figure-3: Right side view of the scalp with fine, short and sparse hair.

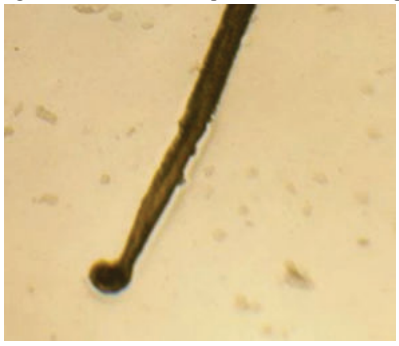

Figure-4: Misshapen bulbs of anagen hair with cuticles having ruffled appearance on light microscopic examination.

DISCUSSION:

Loose anagen hair syndrome is an unusual condition with short, fine, dry, lusterless and easily pluckable hair. Despite the fact that the exact

pathogenesis is still not known, many theories put forward an atypical anchorage of hairs belonging to anagen phase of the hair cycle as a result of early keratinization of the inner root sheath. This causes the painless and easily pluckable hair due to an abnormal anchorage between the cuticles of hair shaft and inner root sheath [4]. Small size of the hair follicle and shorter duration of anagen phase of hair cycle seen in this condition, makes the hair characteristically sparse and short [1].

Although eyebrows and other body hairs can be involved, this condition is confined most commonly to the scalp hair [5]. It has three characteristic clinical subtypes: type A, B and C. Type A signifies reduced density of hair, type B signifies unruly hair mainly and type C consists of clinically normal looking hair with exaggerated loss of anagen hairs that are loose [6]. Among these subtypes, type A and B are frequently encountered in childhood whereas type C is seen commonly in adults [7]. Diagnosis is made by clinical evaluation, hair pull test, light microscopic examination and trichogram. Findings seen on light microscopic examination are not considered specific for this condition making trichogram and hair pull test specific for the diagnosis [8].

Important differential diagnosis for this condition includes alopecia areata, trichotillomania and anagen effluvium. In alopecia areata, the hair loss within the patch is complete with associated nail changes. In trichotillomania, the inner root sheath is safeguarded. Anagen effluvium which is commonly seen in patients treated with chemotherapeutic agents, the hairs have a characteristic tapering of the proximal ends [9].

It is a self-limiting condition that subsides on its own with age probably due to the androgens that act indirectly on the hair follicle [10]. In patients with persistence of this condition into adulthood, minoxidil can be used as a first-line measure which acts by prolonging the anagen phase of hair cycle [11].

CONCLUSION:

Loose anagen syndrome is a self-limiting hair condition that has a significant psychological impact on the affected children. Although a rare presentation, it should be considered as a differential diagnosis in patients with incomplete patchy hair loss and easily pluckable hair affecting the scalp.

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