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Alopecia in pediatric population: A Clinico-epidemiological study

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ABSTRACT

Introduction: Alopecia or hair loss is a common disorder seen in pediatric population. The causes of alopecia in children are varied such as tinea capitis, alopecia areata, telogen effluvium, bacterial infections, hair shaft defects, genetic and systemic disorders. In the past there have been only few studies regarding alopecia in children though many studies in adults have been conducted. **Objectives:** The present study was done to investigate the common and uncommon causes of alopecia in children. **Materials and Methods:** The study was conducted in dermatology department of SKIMS Medical college, Srinagar, Kashmir.It included 100 patients of alopecia meeting the inclusion and exclusion criteria.In addition to history and examination various laboratory investigations were performed to assess the cause of hair loss. **Results:** The results of the study showed the frequency of alopecia being more common in males(61%) as compared to females(39%). The commonest cause of alopecia was tinea capitis followed by alopecia areata and diffuse hair loss, the other uncommon causes being traction alopecia, trichotillomania, aplasia cutis and nevus sebaceous**. Conclusion**: The present study assessed the causes of alopecia in children and thus laid emphasis on early diagnosis and treatment of alopecia to prevent its progression to irreversible hair loss and damage.

Key words: Alopecia, hair disorders, pediatric, tinea

INTRODUCTION

In children, the common causes of alopecia or hair loss differ as compared to adults.The commonest cause of alopecia in adults is androgenetic alopecia[1]. However in children there are other varied presentations and causes of alopecia.The common causes of hair loss in children include tinea capitis,alopecia areata, telogen effluvium, bacterial infections, traction alopecia, trichotillomania[2,3]. Other less common causes include structural abnormalities of the hair shaft resulting in easy breakage and dry brittle hair. Systemic causes of hair loss include thyroid disorders,iron deficiency anemia, diabetes mellitus, and malnutrition[4]. There have been many studies in the past regarding hair loss in adults with very few studies assessing the hair disorders in children. The present study assesses the common causes of alopecia or hair loss in pediatric age group.

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Aims and objectives

The present study was conducted to assess the demographic profile as well as the etiology of alopecia in pediatric population.

MATERIALS AND METHODS

The present study was conducted in department of dermatology SKIMS Medical College, Srinagar, Kashmir. The study group included a total of 100 children with history of hair loss. An Informed consent was obtained from the parents of the study population. The data collected included age, sex, clinical presentation, duration of disease, associated symptoms and family history. Laboratory tests included [full blood count (FBC), thyroid function test (TFT), antinuclear antibody (ANA), urinalysis where ever necessary.

The following were the inclusion and exclusion criteria of the study.

The inclusion criteria

All children aged below 15 years suffering from hair loss.

Exclusion Criteria

The exclusion criteria were all children above 15 years of age.

The scalp examination involved presence of erythema, scaling, crusting and follicular plugging.Also the hair was examined for its color, fragility and texture.
Wood's lamp examination was also performed where ever necessary. KOH (potassium hydroxide) smear of skin and hair scrapings were taken in case of fungal infections. Bacteriological studies were done where bacterial infection was suspected. Microscopic examination of hair as well as dermoscopy were done in few cases.

RESULTS

The results of the study are shown in Table 1 and Table 2.

Table 1:Distribution of hair disorders in pediatric cases of alopecia

Hair disorder	No of patients
Tinea capitis	62
Alopecia areata	16
Diffuse hair loss	12
Traction alopecia	3
Trichotillomania	2
Aplasia cutis	2
Nevus sebaceous	3
Total no of patients	100

Table 2:Sex distribution of hair disorders

Hair disorder	Males	Females
Tinea capitis	41	21
Alopecia areata	9	7
Diffuse hair loss	5	7
Traction alopecia	2	1
Trichotillomania	0	2
Nevus sebaceous	2	1
Aplasia cutis	2	0
Total no of patients	61	39

Of the 100 patents included in the study 61(61%) were males and 39 (39%)were females. The age distribution ranged from 2 months to 14 years. The most common cause of hair loss was tinea capitis present in 62/100 patients. Males (41) were affected more than females(21).The most common presentation was patchy hair loss with scaling and erythema. Some cases had pus discharge and kerion formation. Diagnosis was confirmed by KOH scrapping of scales. The second common form of hair loss was alopecia areata affecting 16 patients of which 9 were male and 7 were female. The commonest presentation was single or multiple patches of hair loss. Ophiasis pattern was present in one case and concomitant hair loss in eyebrows and other body parts was seen in 4 patients. A family history of similar disease was present in 18%(3/16) of patients. These patients were evaluated for other autoimmune diseases however none was found to have any other autoimmune disorder. The third common disorder seen was diffuse hair loss seen in 12 patients. Among these patients females outnumbered males with 7 patients being females out of 12.Lab investigations were performed to know any specific cause of hair loss, however all investigations were normal.Other causes of hair loss included 3 cases of traction alopecia of which 2 cases were males both belonging to sikh community explaining the hair loss due to traction caused by the turban. 2 cases of trichotillomania were seen both of them being females presenting as hair loss with broken hairs of varying length with no signs of inflammation. Nevus sebaceous was seen in 3 patients out of which 2 were males. 2 patients presented with aplasia cutis both being males.

DISCUSSION

Alopecia or hair loss in children is often a common complaint in the dermatological OPD. There are many causes of alopecia in children the common being tinea capitis, telogen effluvium, alopecia areata, bacterial infections, hair shaft disorders and less common being systemic disorders such as iron deficiency, thyroid disorders and genetic disorders such as aplasia cutis

and nevus sebaceous. There have been very few studies in the past assessing the hair loss in pediatric population[5,6].In the present study tinea capitis was the most common cause of alopecia in children accounting for about 62% of the cases followed by alopecia areata seen in 16 % of patients.These results are consistent with the previous study by Khitam Al-Refuwhich which showed tinea capitis as the commonest cause of hair loss in about 40% of patients followed by alopecia areata in 26.2% of patients[7].Another study by Nnoruka EN et al held in South East Nigeria showed tinea capitis as the commonest cause of alopecia in children seen in 54.9% cases children followed by alopecia areata in 38.1% children [8].The third common cause of alopecia was diffuse hair loss for which laboratory investigations were done to rule out any nutritional and systemic cause of hair loss however all investigations were normal. Other causes included 3 cases of traction alopecia, two of them being males from Sikh community due to the practice of tying a tight turban on their heads. 2 cases of trichotillomania were seen presenting as hair loss with broken hairs of varying length with no signs of inflammation. Trichotillomania is a compulsive hair pulling disorder[9]. This type of disorder is of particular concern as it is associated with psychological abnormalities, so these patients need to be assessed by a psychologist in addition to a dermatologist.

Nevus sebaceous was seen in 3 patients and 2 patients presented with aplasia cutis.

CONCLUSION

Hair loss in children is a common disorder and should not be ignored. It is therefore important to diagnose and treat the patients early to prevent irreversible hair loss and scarring alopecia. Also patients with diffuse hair loss should be evaluated for any nutritional deficiency which should be corrected simultaneously.

REFERENCES

1. Banka N, Bunagan MJ, Shapiro J. Pattern hair loss in men: Diagnosis and medical treatment. Dermatol Clin. 2013;31:129–40.
2. Sch Schroeder TL, Levy ML. Treatment of hair loss disorders in children. DermatolTher. 1997;2: 84–92.
3. Mandt N, Vogt A, Blume-Peytavi U. Differential4. Mandt N, Vogt A, Blume-Peytavi U. Differential diagnosis of hair loss in children. J Dtsch Dermatol Ges. 2004;2:399–411.
4. Castelo-Soccio LA. Hair manifestations of systemic disease. Curr Probl Pediatr Adolesc Health Care. 2012;42:198–203.
5. Sarifakioglu E, Yilmaz AE, Gorpelioglu C, Orun E. Prevalence of scalp disorders and hair loss in children. Cutis. 2012;90:225–9.
6. El-Khalawany M, Shaaban D, Hassan H, Abdalsalam F, Eassa B, Abdel Kader A, et al. A multicenter clinicomycological study evaluating the spectrum of adult tinea capitis in Egypt. Acta Dermato venerol Alp Panonica Adriat. 2013;22:77–82.
7. Khitam Al-Refu. Hair Loss in Children: Common and Uncommon Causes; Clinical and Epidemiological Study in Jordan. Int J Trichology. 2013; 5(4): 185–189.
8. Nnoruka EN, Obiagboso I, Maduechesi C. Hair loss in children in South-East Nigeria: Common and uncommon cases. Int J Dermatol. 2007;46:18–22.
9. Huynh M, Gavino AC, Magid M. Trichotillomania. SeminCutan Med Surg. 2013 ;32:88–94.

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