

## A Clinico-Epidemiological Study of dermatoses of Scalp in Children

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### **Abstract: Background:**

Hair & scalp disorders in infants and children are a common occurrence and may constitute a complex clinical problem. They encompass a wide range of conditions with varied pathology that can be either congenital or acquired. They are also a source of anxiety & concern for patients and families.

### **Aim:**

To evaluate the clinical and epidemiological profile of hair & scalp dermatoses in children.

### **Methodology:**

A total of 100 children from birth to 15 years suffering from various hair disorders were included in the study. The data includes personal & family history, clinical examination, possible investigations, final diagnosis and therapeutic interventions.

### **Results:**

A total of 100 children were studied. Majority belonged to the age group 6-12 years. The most common cases were Alopecia areata, tinea capitis, furunculosis and pediculosis. Other causes are nevus sebaceous, congenital aplasia cutis, monilethrix & folliculitis decalvans.

### **Conclusion:**

Infections are the most common cause of hair disorders in our study. Various factors such as malnutrition, overcrowding, poor personal hygiene, poverty is responsible for higher incidence in lower socio-economic group. A hair deficit that may be an isolated feature or any associated multisystem disorder should be recognised. Early management is needed as it has an effect on normal physical and mental growth of children.

**Key words:** scalp dermatoses, infections

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## I. Introduction

- ▶ Hair & scalp disorders in children are a common occurrence in Dermatology OPD and may constitute a complex clinical problem.
- ▶ They are also a source of anxiety & concern for patients and their families.
- ▶ The most common causes of hair disorders in children<sup>[1]</sup> are folliculitis, furunculosis, tinea capitis, alopecia areata, pediculosis capitis.
- ▶ Less common causes include scalp psoriasis, pityriasis capitis, monilethrix, congenital atrichia, nevus sebaceous, piebaldism, pityriasis amiantacea, pyogenic granuloma.
- ▶ Hair disorders can be congenital or acquired and the clinical presentation varies widely ranging from subtle to disfiguring forms.
- ▶ Hence, this study is conducted to prevent further complications and treat accordingly

## II. Materials and Methods

A prospective observational study was conducted in our hospital. A total of 100 children from birth to 15 years suffering from various hair disorders included in the study. The cases were selected on the basis of following inclusion and exclusion criteria:

### **Inclusion criteria:**

- ▶ Includes all children from birth to 15 years suffering from various hair/scalp disorders.

### **Exclusion criteria:**

- ▶ All children above 15 years of age.

### III. Objective

The objective of this study is to evaluate the clinical and epidemiological profile of hair disorders in children to prevent further complications.

Data collected includes age, sex, clinical presentation, family history, any systemic diseases, cutaneous or nail changes and drug history.

Scalp examination includes:

- Skin of scalp for erythema ,scaling etc..
- Hair examination for colour, texture, fragility
- Scrapings for KOH mount
- Bacteriology and Mycological studies.

### IV. Results

Out of 300 children attending DVL OPD ,100 children were suffering from scalp disorders of which 58 were males and 42 were females.

Age range was from birth to 15 years [Chart 1]

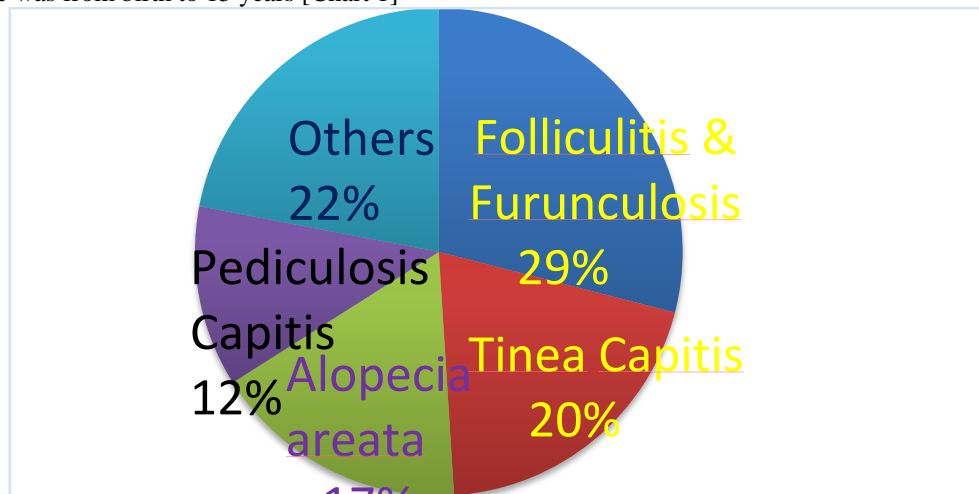


Chart 1: causes of hair disorders

The most common causes were folliculitis and furunculosis (29%), Tinea capitis (20%), Alopecia areata(17%), Pediculosis capitis(12%)

Other causes [Chart 2]

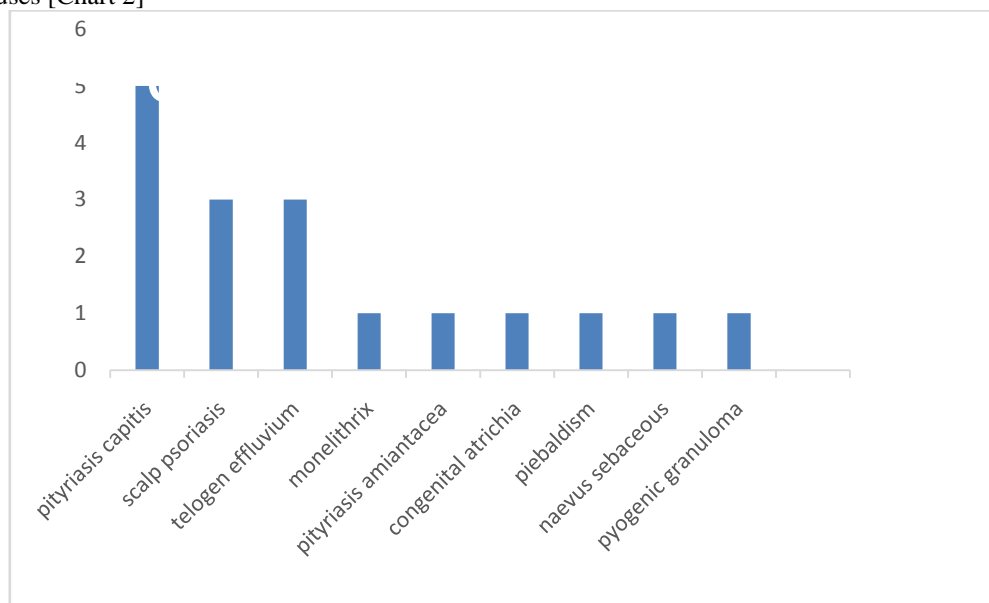
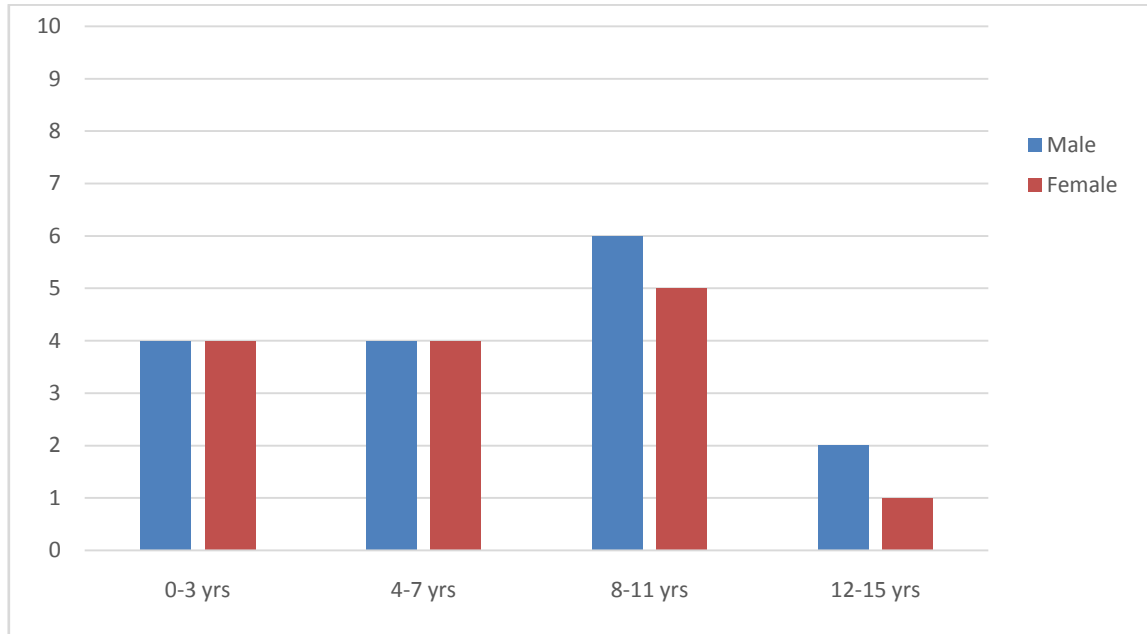


Chart 2: other causes include

**V. Discussion**

**Folliculitis&Furunculosis:**

Infections are the most common cause of hair disorders <sup>[2]</sup> in our study. Males & females are almost equally affected with incidence more in older children. Factors such as overcrowding, malnutrition and poor personal hygiene were responsible for higher incidence in lower socioeconomic groups. Etiology <sup>[3]</sup> identified were Staphylococcus aureus(52%), Streptococcus pyogenes & staphylococcus aureus(25%), Streptococcus pyogenes(23%). Age and sex incidence are illustrated in [Chart 3]



**Chart 3: Age and sex incidence**

**Tinea capitis:**

Tinea capitis <sup>[4]</sup> is an infection of hair shafts by a dermatophyte fungus. It can be inflammatory or noninflammatory. Most common age group affected is 6 to 10 years, out of which males predominate in our study. Non-inflammatory cases constitute 52.6%, whereas inflammatory is 28.5%. Mixed pattern was seen in 18.9% of cases. Endothrix pattern was observed in 47.5% of cases whereas Ectothrix pattern seen in 28.5% of cases and mixed pattern is seen in 24% of cases.

**Alopecia areata:**

Alopecia areata <sup>[5]</sup> is a chronic inflammatory disorder caused by a T cell mediated autoimmune mechanism on the hair follicle. About 25% of cases of alopecia areata in children are associated with family history, atopy & nail changes. Various patterns in children are as follows [Chart 4]

Patchy type	64%
Ophiasis type	18%
Sisiapho type	12%
Alopecia sub totalis	6%

**Chart 4: Frequency of various types of alopecia areata**

**Pediculosis capitis:**

In this study, females were three times more commonly affected than males. The highest incidence was observed in 8 to 12 years age group.

**Others:**

Ophiasis pattern [Figure 1], Pityriasis capitis, monilethrix [Figure 2], congenital atrichia [Figure 3], nevus sebaceous [Figure 4], scalp psoriasis, piebaldism and folliculitis decalvans are of concern in this group.

**Figure 1: Ophiasis pattern**



**Figure 2: Monilethrix**



**Figure 3: Congenital atrichia**



**Figure 4:** Nevus sebaceous



## **VI. Conclusion**

Hair loss in children is a common complaint[7] in Dermatology clinics and it is considered as a challenge for Dermatologists for reaching a proper diagnosis and treatment. The most common disorder according to our study was primarily infectious in origin, which can be prevented and treated by early diagnosis. Improvement of standard of living has a profound effect on these disorders. Specific cultural [8] and environmental factors may reflect on prevalence of various hair disorders.

## **Declaration of patient consent**

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

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Nil

## **Conflicts of interest**

No conflicts of interest

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