



A HOSPITAL BASED CLINICAL STUDY OF CHILDHOOD PSORIASIS IN A TERTIARY CARE CENTER OF RURAL PART OF INDIA

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ABSTRACT

Background: Childhood psoriasis has been reported to differ from adult psoriasis. There are very few studies on childhood psoriasis in rural part of India. A detailed clinical study will help to understand better the disease profile in children, henceforth the better diagnosis and treatment. **Objective:** The objective of this study was the clinical profile of childhood psoriasis. **Materials and Methods:** The present observational study was conducted in the Dermatology Outpatient Department of tertiary care centre of rural part of India, during 12 months from January 2023 to December 2023. All children up to 13 years presenting with psoriasis during 1 year were taken as study participants after obtaining the written consent from the parents. A detailed examination and relevant investigations were done. The findings were mentioned in a pro forma for the analysis and interpretation of data. **Results:** A total of 32 cases of childhood psoriasis were included in the study. The prevalence of childhood psoriasis in our study was 0.72% out of which 24 (75%) were Males and 8 were Females (25%). The most common type was plaque type 28 (87.5%). About 9.3% patients had a positive family history. **Conclusion:** Frequent involvement of face, trunk, and groin was noted in childhood psoriasis compared to adults.

KEYWORDS : Childhood Psoriasis, Pappulosquamous, Immune-mediated

INTRODUCTION

Psoriasis is a chronic papulosquamous, immune-mediated, proliferative condition of skin Characterized by erythematous, scaly, sharply demarcated plaques, present mainly over the extensor surfaces of the body involving scalp and joints which affects 2%–3% of the global population.¹ Childhood psoriasis being more frequently pruritic; thinner plaques, softer, and less scaly, face and flexural involvement is common than adult type. Psoriasis can have a profound impact on physical, emotional and social functioning, and overall quality of life in children leading to a great amount of stress and anxiety among the concerned parents. There are a limited number of studies on childhood psoriasis in this part of India. Therefore, a detailed clinical study will help us to understand the disease profile in children of this part of the India.

MATERIALS AND METHODS

The present observational study was conducted in the Department of Dermatology in the Government Medical College of India during 12 months from January 2023 to December 2023, after due approval from the Institutional Ethical Committee. All children up to 13 years presenting with psoriasis in the Dermatology Outpatient Department for those 12 months were enrolled as study participants. A detailed general, systemic, and cutaneous examination was done. Relevant investigations were carried out whenever necessary. The findings were recorded in a pro forma for analysis and interpretation of data.

RESULTS

During the study, 4423 pediatric patients attended the Dermatology Outpatient Department, of which 32 of them had psoriasis. Thus, the prevalence of childhood psoriasis in our outpatient pediatric population was 0.72%, out of which Male cases of Psoriasis were 24(75%) whereas Female cases 8 (25%) with a ratio of 3:1. The age and sex distribution of childhood psoriasis is shown in Table 1. A maximum number of cases were 24(75%) in the age group of 9 to 13 years of age, followed by cases in 5–8 years were 6(18.75%) which was followed by 2(6.25%) cases in 0–4 years. Mean age of onset was found to be 9.68 years. The youngest patient in our study was 10month old. A maximum number of cases were reported

in the winter months (43.75% cases) followed by spring (28.12% cases). The season-wise distribution of childhood psoriasis is shown in Table 2. The trunk and extremities were the most common site to be involved in psoriasis followed by scalp, face and groin. plaque type (87.5%) was the most common type of psoriasis, followed by plantar psoriasis and scalp psoriasis. There was one case of pustular, and one erythrodermic psoriasis. Family history was positive in three cases constituting 9.3% of the total cases of psoriasis. Nail involvement was noted in one case. Pruritus was found to be present in 26 cases constituting 81.25% of all the cases with psoriasis.

Table 1: Age and Sex distribution of childhood psoriasis

Age Group(years)	Male (%)	Female (%)	Total (%)
0-4 years	2(6.25%)	0	2(6.25%)
5-8 years	4(12.5%)	2(6.25%)	6(18.75%)
9-13 years	18(56.25%)	6 (18.75%)	24(75%)
Total	24(75%)	8(25%)	32 (100%)

Table 2: Season-wise distribution in childhood psoriasis

Season	Number (%)
Spring	9(28.12%)
Summer	3(9.3%)
Autumn	6(18.75)
Winter	14(43.75%)
Total	32(100%)

DISCUSSION

Childhood psoriasis is relatively common, but only limited epidemiologic data are available. The prevalence of childhood psoriasis in our outpatient pediatric population was 0.72%. According to Dogra and Kumar the point prevalence of psoriasis was found to be 0.02% in school going children aged 6-14years.² Karthikeyan et al.study 1.4% of all pediatric dermatoses seen in patients less than 14 years of age were psoriasis at a referral hospital in South India³. The peak age of onset in childhood psoriasis varied in different studies. In surveys from India and Denmark, most patients developed first symptoms at the ages of 6–10 years⁴, but according to some authors, peak age of onset is 15–25 years⁵. In a study from Denmark by Nyfors and Lemholt the mean age of onset

was 8.1 years⁶. Two other recent studies reported the mean age of onset to be 9.96 years and 11 years.^{7,8} In our study, the peak age of onset was 9–13 years and the mean age of onset was 9.68 years which is quite similar to other studies. The youngest patient was 10 month old in our study. It is commonly found that childhood psoriasis more common in females than males, but in our study, Male cases of psoriasis 75% outnumbered female cases 25% with a ratio of 3:1 which is not consistent with most other studies.⁹ Tollefson *et al* reported that boys and girls were almost equally affected in childhood¹⁰. Wu *et al.* reported exacerbations of the disease in spring and winter months¹¹. In our study, a maximum number of cases with childhood psoriasis presented in the winter months, thereby indicating an exacerbation of the disease process during this time of the year.

The family history was positive in 9.3% of the total cases of psoriasis in the present study. Morris *et al* reported a much higher rate of positive family¹². Childhood psoriasis is often precipitated by infections and commonly manifests as acute guttate psoriasis. However, most Indian studies report that the established plaque type of disease is more common in children than the guttate variety. In our study, plaque type 87.5% was the most common type of psoriasis at presentation, followed by plantar psoriasis and scalp psoriasis. There were one pustular and one erythrodermic psoriasis.

Kumar *et al* reported that extensors of the legs (25%) cases were the most common initial site affected, followed by the scalp (20.7%)⁷. Wu *et al* reported that scalp was the most common initial site affected (50.3%)¹¹. Our study showed that the lower extremities and trunk (42%) were the most common site of onset in psoriasis, followed by scalp. A majority of the past studies done in pediatric patients found that the scalp and extremities were the two most common sites to be involved in psoriasis, with some reporting extremities more common than scalp disease.¹² In childhood psoriasis, the involvement of the face is a frequent observation, which varies from 18% to 46% in various reports whereas mucosal involvement is found to be rare in Indian children⁹. About 25% cases were found to have facial involvement in our study.

In a study from North India by Kumar *et al* nail involvement was observed in 31% cases⁷. Tollefson *et al* reported that nail involvement was present in 17% cases¹⁰. Our study recorded nail involvement in one case of childhood psoriasis. Kumar *et al* reported that pruritus was the most frequent symptom and was present in 87.1% children. The present study recorded pruritus in 81.27% of all the cases with childhood psoriasis.

CONCLUSION

Childhood psoriasis was found to be more common in males than females like the adult-onset form of psoriasis. More frequent involvement of soles was reported in childhood psoriasis but in our study trunk and face unlike other parts of the world. Chronic plaque type was the most common type in childhood psoriasis. Furthermore, pediatric patients had significantly more involvement of the trunk, face, and groin than did adult patients, thus indicating that the clinicians must keep a high level of suspicion for psoriasis while encountering rashes in these locations in children. Long-term clinicoepidemiological studies are required for better understanding of childhood psoriasis and to note the differences in clinical findings from the adult-onset form, as well as to know better about the geographical and genetic influences in the manifestation of the disease in children.

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