



RETROSPECTIVE OBSERVATIONAL STUDY ON CLINICAL PROFILE OF CHILDHOOD PSORIASIS IN A TERTIARY CARE CENTRE OF NORTH INDIA.

Dermatology

Dr. Sunita Arora	Senior Resident, Department of Dermatology, Venereology and Leprosy, Government Medical College, Circular road, Amritsar, Punjab 143001, India.
Dr. Sandeep Sidhu*	Assistant Professor, Department of Dermatology, Venereology and Leprosy, Government Medical College, Circular road, Amritsar, Punjab 143001, India *Corresponding Author
Dr. Guneet Gandhi	Junior Resident, Department of Dermatology, Venereology and Leprosy, Government Medical College, Circular road, Amritsar, Punjab 143001, India.
Dr. Tejinder Kaur	Professor and Head, Department of Dermatology, Venereology and Leprosy, Government Medical College, Circular road, Amritsar, Punjab 143001, India.

ABSTRACT

Background: Psoriasis is a chronic inflammatory, immunologically mediated disorder. Psoriasis in children is not rare.

METHODS: This retrospective observational study was conducted in psoriasis clinic of dermatology outpatient department of tertiary care institute in Northern India over a period of 3 years from September 2016 to August 2019 wherein collected data of all children of age less than or equal to 14 years with psoriasis was statistically analysed. The findings like distribution of age and gender, sites of onset, type of psoriasis, family history, exacerbational factors were assessed.

RESULTS: Out of total 45 children with psoriasis, 26 were males (57.77%) and 19 were females (42.22%). Most of the cases were seen in the age group of 10-14 years (68.88%). Most common site of onset was lower extremities (28.88%). Most common type of psoriasis was plaque type (77.77%). Koebnerisation was seen in 12 (26.66%) cases. 5 children (11.11%) had positive family history.

KEYWORDS

childhood, psoriasis, clinical profile.

INTRODUCTION :

Dermatological conditions in children put most of the primary care physicians into dilemma.[1] Psoriasis is a chronic inflammatory immune mediated hyperproliferative papulosquamous disorder affecting the skin, nails and joints. Incidence of psoriasis worldwide is 2-3%.[2] Paediatric population suffering from psoriasis is 0.5-2% and infants are rarely affected. [3,4] Childhood psoriasis differs from psoriasis in adults in that it is more pruritic and lesions are less scaly, thinner and softer with common involvement of face and flexures. [5]

MATERIALS AND METHODS:-

This retrospective observational study was carried out at dermatology department of tertiary care centre in North India assessing data of all children of age less than or equal to 14 years with psoriasis over a period of 3 years (September 2016 to August 2019) after taking clearance from Institutional Ethics Committee (IEC Code No. 2058). Complete statistical evaluation of record including detailed history of children with psoriasis, cutaneous and systemic examination with investigations including complete blood count, liver function tests, kidney function test, ASO titres, serum calcium, serum uric acid, fasting lipid profile, serum proteins was done. As per record, informed consent from the guardians of suffering children was taken for treatment purpose.

OBSERVATIONS AND RESULTS:-

Out of total 357 patients registered in psoriasis clinic during a study period of 3 years, 45 were children less than or equal to 14 years. 26 were boys (57.77%) and 19 were girls (42.22%). Male cases outnumbered female cases with a male:female ratio of 1.3:1. Maximum number of cases i.e. 31 (68.88%) were seen in 10-14 years of age group followed by 13 cases (28.88%) in 5-10 years of age group which was followed by 1 case < 5 years of age (2.22%).

Mean age of onset was 10.9±2.891 S.D.

Mean age in boys and girls was 10.40 and 11.02 respectively.

Girls had delayed age of onset as compared to boys. Least age at onset was 3 years.

Table 1: showing age and gender distribution

Age group	Male	Female	Total
0 - <5	-	1	1
5 - <10	9	4	13
10 - <14	17	14	31
Total	26	19	45

Plaque type of psoriasis was the most common type (77.77%) of psoriasis followed by guttate type (11.11%) followed by palmoplantar type (4.44%).

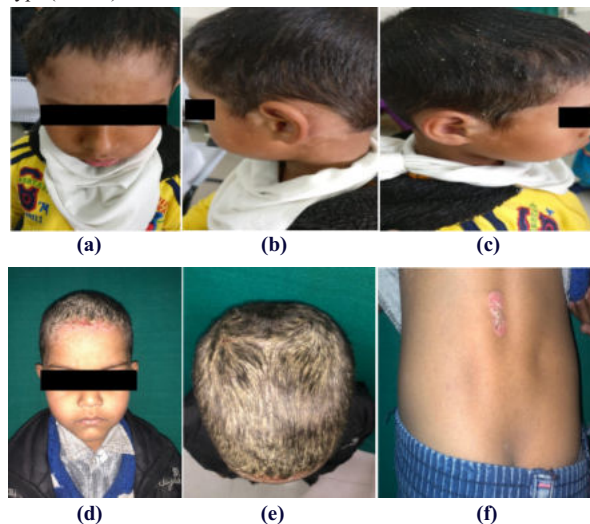


Figure (a)-(f) showing lesions of psoriasis in children

History of pharyngitis was present in 3 out of 5 patients of guttate psoriasis.

There was 1 case of pustular psoriasis.

Koebnerization was seen in 12 (26.66%) cases.

Table 2 : showing the morphological type

Type	Number
Chronic plaque	35
Guttate	5
Palmoplantar	3
Rupoid	1
Pustular	1

The most common site of onset was lower extremities (28.88%) followed by scalp (22.22%) followed by upper extremities (13.33%) and trunk (8.88%).

Table 3: showing sites of onset

Site of onset	Number
Scalp	10
Neck	1
Chest	1
Back	4
Arms	6
Lower limb	12
Soles	4
Nails	1
Multiple sites	5
None	1

Nail changes were seen in 55.55% of the patients of which pitting was the most common change seen in 44.44% of the children followed by onycholysis and discolouration, beaus lines, subungual hyperkeratosis and ridging of nail plate.

Table 4 : showing nail involvement

Nail involvement	Number
Pitting	17
Longitudinal ridges	1
Discolouration	5
Nail plate hypertrophy	1
Onycholysis	5
Crumbling	2
Onychomadesis	1
Subungual hyperkeratosis	1
Beaus line	1
Leuconychia	2
Melanonychia	1
No nail changes	20

No history of atopy was there in any case.

5 children (11.11%) were having positive family history of psoriasis.

17 children (37.78%) had presented with the involvement of <10% BSA. 13 children (28.89%) had 20-<30% of BSA involved.

Table 5 : showing body surface area involved

Body surface Area (%)	Number
0 - <10	17
10 - < 20	7
20 - < 30	13
30 - <40	0
40 - <50	4
50 - <60	2
60 - <70	2

DISCUSSION

Psoriasis is becoming a common disorder among children these days but there are limited number of studies on childhood psoriasis.

In our study, childhood psoriasis comprised 12.60% of total psoriatic patients visiting psoriasis clinic in dermatology outpatient department which is similar to study[6] done in North India in 2004 which was 12.5% but in another study [7] it was 17.15%.

Data showed that the prevalence of childhood psoriasis in outpatient population visiting skin OPD was 0.55% which was comparable to a study[8] showing prevalence of 0.54% but it was less when compared to another study[9] done at a referral hospital in South India which was 1.4%.

We observed that boys with psoriasis (57.77%) outnumbered girls (42.22%) with male to female ratio of 1.3:1. A study by Kumar et al[6] showed a male to female ratio of 1.09:1.0. Nanda et al[10] observed male preponderance in his study also with male to female ratio of 1.03:1. Whereas in a study by Raychaudhari[11] and Farber[12], females outnumbered males.

Psoriasis is a genetically determined disorder and risk of psoriasis increases in children having relatives suffering from the disease.[13] Our data revealed positive family history in 5 children (11.11%) of the total childhood psoriasis cases. This finding differs from the other studies by Kumar et al[6] and a study of 419 patients from North India

which revealed positive family history in only 4.5% patients.[14] However, this percentage is less when compared to study by Morris et al.[15]

Childhood psoriasis commonly manifests as acute guttate psoriasis precipitated by infections usually of upper respiratory tract like sore throat and pharyngitis.[16] Other precipitating factors are trauma and stress. But various studies from India report that children commonly present in clinics with well established plaques rather than guttate type lesions. [6,10]

Our retrospective data showed plaque type of psoriasis as the most common type of psoriasis (77.77%) on presentation followed by acute guttate type in 11.11% of cases with positive history of pharyngitis in 3(6.66%) out of 5 cases of guttate psoriasis. Data finding showed that plaques in children were thinner, smaller and scales were fine as compared to adults having large plaques with thick scales. This observation is comparable to another studies.[6,17] which showed plaque type of psoriasis as the commonest type in children. Facial involvement is seen frequently in childhood psoriasis with rare involvement of mucosa.[23] Our data showed involvement of face in the form of eczematous lesions over eyelids and ears in 22.22 % of total cases which is in accordance with other study [23] which showed facial involvement in 26.92%.

Palmoplantar psoriasis is not common in children. [10,18] Palmoplantar psoriasis in our study was seen in (4.44%) children which is in accordance with other study. [15] This may be due to their playing habits and walking barefooted in India resulting in friction and koebnerisation on the palms and soles.

Pustular psoriasis is rare in children. [5]

1 child enrolled in the clinic showed pustular type of psoriasis which was due to topical application of some indigenous medicine.

Psoriasis occurs commonly on friction and trauma prone areas, which explains the most common site of involvement of extremities (28.88%) in our study followed by scalp (22.22%). It is in accordance with other studies.[19,20] Nail changes were seen in 55.5% of children of which pitting was the most common finding in 44.44% which is in accordance with other studies.[18,21]

In our study, we noted exacerbation of psoriasis in spring and winter months which is in accordance with study by Wv et al [22] but study by Seujee Das [23] showed exacerbation in spring and autumn seasons.

It has been observed that obesity is an important risk factor for the development of childhood psoriasis and metabolic syndrome.[24] In our study, 4 children (8.89%) were found to be obese with blood pressure, blood sugar and lipid profile within normal limits. So none of the children in our study had any association with metabolic syndrome. Treatment in the form of emollients, topical keratolytics, topical corticosteroids and Vitamin D3 analogues was given in 28 (62.22%) children with Body Surface Area (BSA<10%).

16 (35.55%) children with extensive lesions (BSA>10%) were treated with antimetabolite methotrexate in the dose of 0.2-0.4 mg/Kg/week. 3 (6.66%) children had minor gastrointestinal symptoms while others tolerated it well. Methotrexate was preferred because of its affordability and efficacy. Response to methotrexate was excellent in 12 children with >75% decrease in Psoriasis Area Severity Index (PASI) within a period of 6 weeks which is in accordance with study done by Kumar et al.[6]

The case of pustular psoriasis also responded well to methotrexate on withdrawal of topical indigenous medication.

CONCLUSION- We conclude that in our retrospective observational study, childhood psoriasis was more common in males like adult onset form and chronic plaque type was the most common type.

Limitations of the study:

Patients of childhood psoriasis comprised of 12.60% of total psoriatic patients visiting psoriasis clinic, which is not a significant number; hence study findings cannot be generalised. Study could be better if prospective study was carried out with more number of patients for a longer duration.

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CONFLICTS OF INTEREST: Nil.**REFERENCES:-**

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