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A STUDY ON *LICHEN PLANUS* IN CHILDREN

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Abstract
Introduction: Lichen planus is considered to be rare in children. However, it does not appear to be uncommon in Indian subcontinent.
Aims: The study was undertaken to analyse the clinical profile of childhood lichen planus.
Material and Methods: We selected 30 children with LP for the study. The children selected were below the age of 14 years of age.
Results and Discussion: In our study, it was seen that that the maximum onset of disease was between 5-9 years of age and mean age of children with LP was 6.8 years. The commonest type of LP in children was classical LP seen in 60% children, followed by actinic LP in 20% children. LP hypertrophicus and linear LP were seen in 10% patients each. Nail changes were seen in 10% patients.

Key words: lichen; autoimmune; childhood; pruritis; childhood; nails

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Introduction

The term ‚lichen' is probably derived from the Greek verb ‚to lick'. However, the use of the term is adapted to a noun in both Greek and Latin for a symbiotic form of plant life. The dermatosis, lichen planus (LP) was first described by Erasmus Wilson in 1869 and is characterized by purple, polygonal, pruritic, papular eruption of unknown etiology affecting skin that can also involve the mucous membranes and the nails. It has been hypothesized that the rarity of associated autoimmune conditions, exposure to drugs and dental restorative materials, infective agents and other environmental triggers that have been known to initiate lichen planus may be responsible for the overall rarity of LP in children [1,2]. The scarcity of reports may further be due to overall rarity of LP in children, 2-3% of total LP occurring in children below 20 years of age. Under-reporting may also influence the apparent rarity of childhood LP [3].

Aims

The study was undertaken to analyse the clinical profile of childhood lichen planus.

Material and Methods

We selected 30 children with LP for the study. The children selected were below the age of 14 years of age. Prior approval of the hospital ethical committee and informed consent from the parents of the children was taken for the study. The patients were diagnosed on the basis of clinical symptoms and signs. Routine investigations wew done in all the patients. Histopathological examination of the patients was done wherever the diagnosis was in doubt and not in every case.

Results

The results were tabulated and the data was analysed.

Sr No	Type of lichen planus	Number	Percentage
1	classical lichen planus	18	60
2	actinic lichen planus	6	20
3	lichen planus hypertrophicus	3	10
4	linear lichen planus	3	10
	TOTAL	30	100

Table I. Various types of lichen planus in children

Sr no	Nail changes	Number	Percentage
1	Pterygium	1	3.3
2	Longitudinal striations and nail discoloration	1	3.3
3	Nail dystrophy and trachyonychia	1	3.3

Table II. Nail involvement in children

Discussion

It was seen in our study that the maximum onset of disease was between 5-9 years of age and mean age of children with LP was 6.8 years. Males outnumbered females Males: Females was 2:1. Koebners phenomenon in our study was seen in 35% patients in our study. In our study, skin involvement alone was seen in 26(86.6%) patients mucosal involvement alone was seen in 1(3.3%) patient. Both skin and mucosal involvement was seen in 3(10%) patients. Scalp involvement was seen in 1(3.3%) patient. The commonest type of LP in children was classical LP seen in 60% children, followed by actinic LP in 20% children. LP hypertrophicus and linear LP were seen in 10% patients each. Nail changes were seen in 10% patients. The common nail changes included pterygium, longitudinal striations with discoloration and nail dystrophy seen in 3.3% patients each. The primary lesion of lichen planus is a violaceous, flat topped, polygonal, pruritic, papule, and represents commonest among all the morphologies of lichen planus in all age groups. Linear LP, LP hypertrophicus, and annular LP are known to be common variants while mucosal involvement is rare in children [4-6]. Actinic LP (Fig. 1) is common in tropical and sub-tropical countries including India. Koebner's phenomenon is considered to be common in children with LP, varying between 24 and 28% [7].

Initially linear LP was thought to be more common in children as compared to adults, but recent studies have shown results on the contrary [8-10]. Linear lichen planus has been observed in 8-30.4 % patients. The high incidence of linear lesions in children may be due to increased tendency of children to traumatize themselves leading to Koebnerization. In general, lesions in linear lichen planus are disposed along solitary strips or segments of skin and are more extensive than those observed with Koebner's phenomenon. Multiple linear lesions resembling a zosteriform distribution may occur. Actinic lichen planus is considered to be the disease of middle aged people (third decade) and has been reported commonly from Middle East. It occurs uncommonly in children. It was observed that patients with actinic LP attended the clinic earlier (3.9 months) due to acute onset of the lesions and cosmetic reasons as compared to other variants of LP [11-13].

Histopathology of the lesions revealed band like mononuclear infiltrate (Fig. 2) along the dermoepidermal junction with focal hypergranulosis and saw toothed rete ridges. Nail involvement is rare in children while it occurs in 1-10% of adults. In different studies, nail involvement has been found in 0-8.7% of patients [14]. Longitudinal ridging was the most common finding in 17%, followed by pitting in 15%, thinning of nail plate in 9% patients, trachyonychia, discoloration, nail dystrophy, subungual hyperkeratosis, onycholysis, nail splitting, thickening of nail plate and leukonychia in decreasing order of frequency.

There is no consensus regarding the treatment of childhood LP. Topical corticosteroids and oral antihistamines remain the treatment of choice in most patients with localized classic disease [15]. For mucosal LP, the presence of dental amalgam should be looked for and its removal can be considered, if the lesions do not improve with commonly used medication [16]. Topical treatment options for oral lichen planus include corticosteroids in orabase, topical tretinoin or isotretinoin gel, and topical tacrolimus or pimecrolimus. Oral agents that can be used for mucosal LP are systemic glucocorticoids, griseofulvin, hydroxychloroquine, azathioprine, mycophenolate mofetil and acitretin [17]. Intraleisonal triamcinolone may be used for both oral and cutaneous LP (hypertrophic) if the child can be convinced about the procedure.

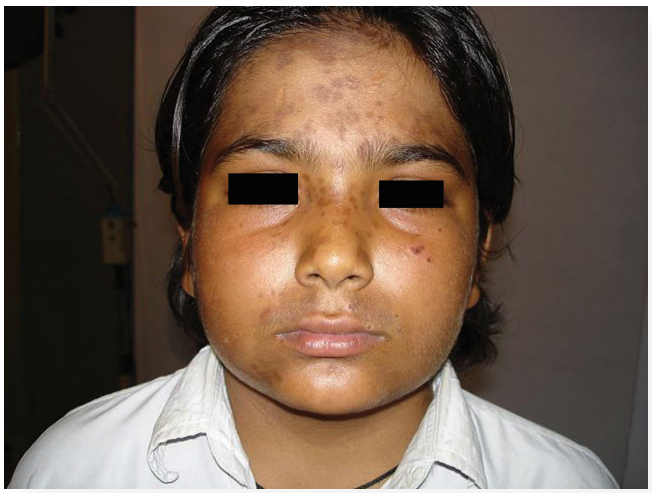

Figure 1. Figure showing actinic lichen planus in an 11 year old child

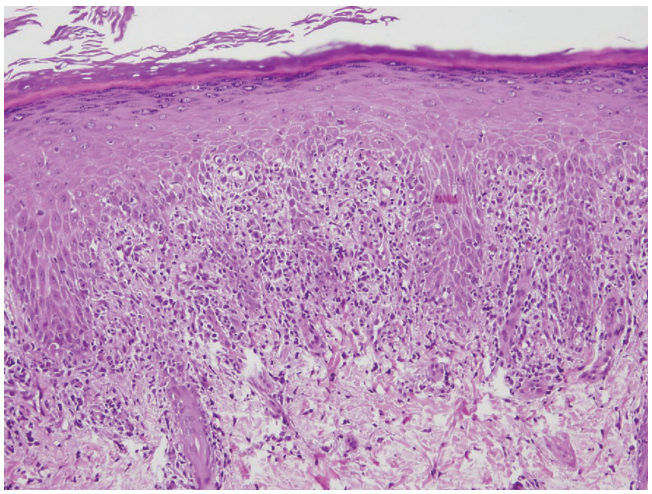

Figure 2. Photomicrograph of lichen planus showing acanthosis, lichenoid mononuclear dermal infiltrate and colloid bodies. (H&E stain 100x)

Conclusions

The natural history of LP in children was essentially similar to that in adults. Unusual features, such as involvement of the palms and soles and upper eyelids, were observed. Actinic LP, mimicking melasma, as reported in adult women, also seems to occur in children.

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