Case Report

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Lichen Striatus with Nail Dystrophy in a 5-Year-Old Girl

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ABSTRACT

Lichen striatus (LS) is an uncommon dermatosis. Nail involvement in this disorder is rare. Diagnosis is usually based on characteristic clinical features include linear papules along Blaschko lines and partial dystrophy of a single nail. LS is self-resolving and gradually improves over several months to years. We report a 5-year- old girl with LS that presented with asymptomatic linear skin-colored papules which had extended from left elbow to left index finger nail. Simultaneous lateral nail dystrophy was consistent with nail LS diagnosis. Currently there is no specific treatment for LS and its nail dystrophy. However, prescription of topical steroid and calcineurin inhibitors have been ordered. For the current case, we prescribed topical triamcinolone.

Keywords: Lichen striatus, Nail dystrophy, Blaschko lines

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1. Introduction

Lichen striatus is an asymptomatic and uncommon linear dermatosis. Generally, children are more affected than adults. Nail involvement in LS is rare. Approximately 30 cases of nail LS were reported in the literature from 1972 to 2015 (1). In a study conducted in Italy on 115 children with LS only 3 cases had nail involvement (2). The fact that nail dystrophy in LS is under-recognized may partly be due to unfamiliarity of physicians with nail changes of LS. Herein, a case of 5-year-old girl with LS and nail dystrophy is presented that to the best of our knowledge is the first case of nail LS reported from Iran.

2. Case Presentation

A 5-year-old girl was referred to our dermatologic clinic. At presentation, her chief complaint was skin rash on the left upper extremity and a nail change of the corresponding index finger. Lesions started 5 months before the referral and were asymptomatic. Her parents noted that the skin lesions were gradually fading and their main concern was about the nail change. Past medical and family history were unremarkable. Any kind of drug intake was denied.

No history of trauma to the affected sites was reported. In dermatologic examination, skin-colored, flat-topped papules were found to extend from left elbow to the extensor aspect of forearm, dorsum of the hand and the index finger along the Blaschko lines (Figure 1).Interestingly, in the lateral part of the left index finger nail, longitudinal ridging, distal splitting, and some thickening were observed (Figure 2).

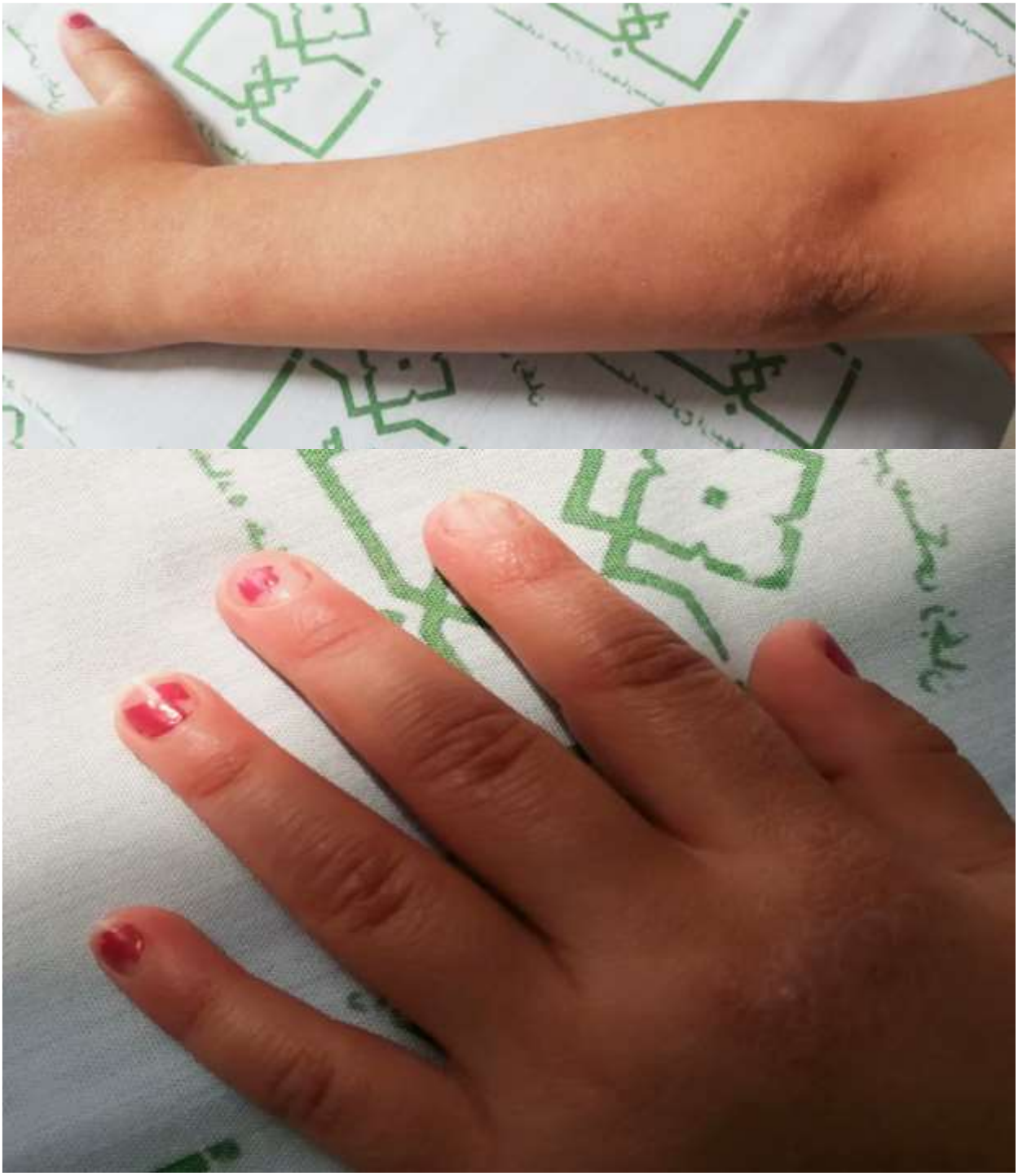


Figure 1. Linear band composed of red and skin-colored, flat-topped papules with some hypopigmentation on the left elbow, forearm, dorsal surface of the hand and index finger (along the blaschko line). Nail dystrophy can also be seen.

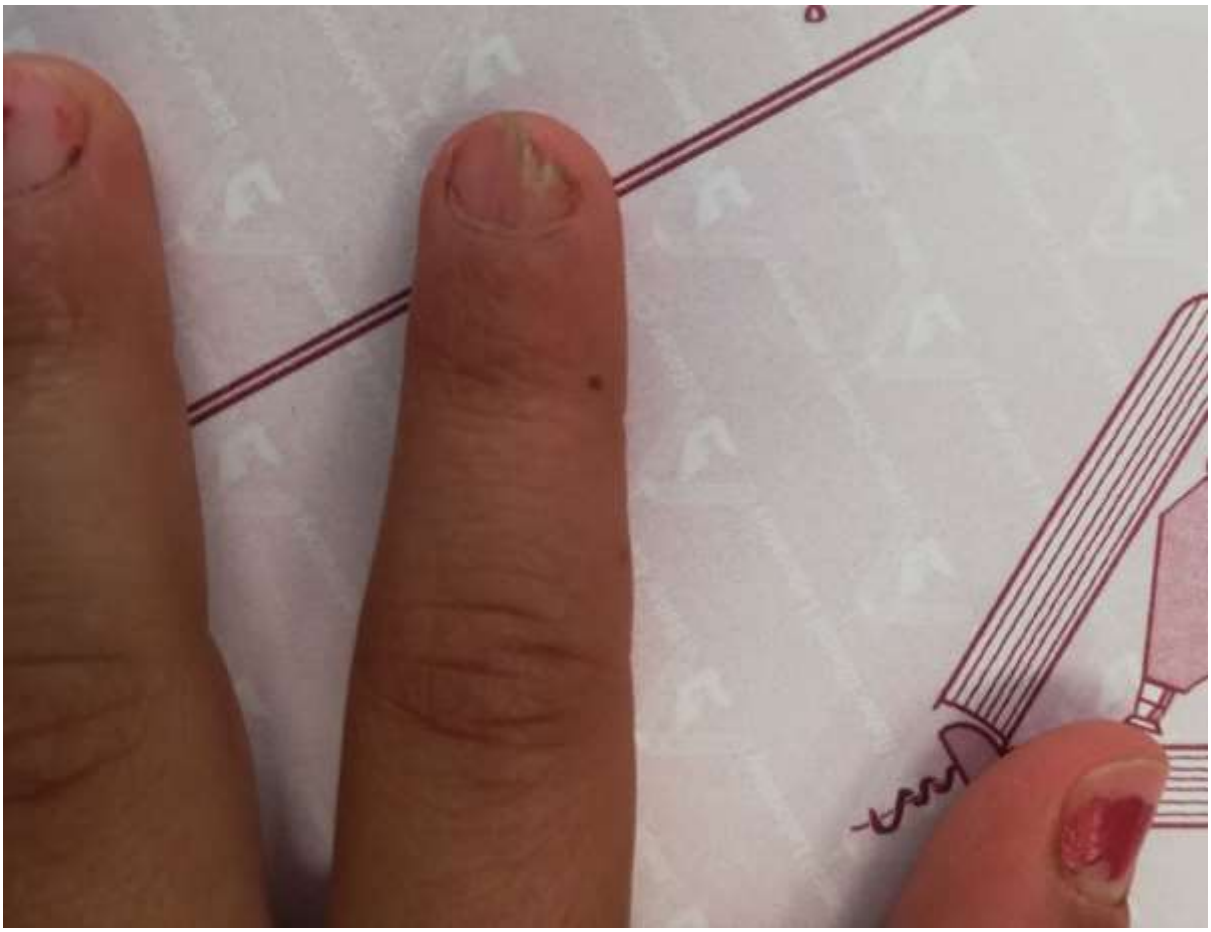


Figure 2. Lichen striatus nail dystrophy is typically limited to the lateral portion of the index finger nail along the skin lesions of the corresponding finger.

The rest of physical examination was normal. Based on the history and typical clinical features, the diagnosis of LS with nail dystrophy was confirmed. Hoping to hasten improving of the lesions, we prescribed topical triamcinolone.

3. Discussion

LS is benign, acquired and self-limiting inflammatory dermatosis of unknown etiology. Genetic, infectious and environmental factors are thought to be involved (3, 4).LS mostly affect children between 4 months to 15 years. The male to female ratio is approximately 1: 2 (1, 2,5).It presents as unilateral asymptomatic skin-colored, pink or red, flat-toped papules that follow Blaschko lines (6). Lesions are more commonly seen over upper extremity, lower extremity, trunk, and less frequently on the face. Pruritus is rare. Hypopigmentation is not uncommon sequel and takes time to disappear. Nail involvement in LS is rare. It may occur before or after the skin lesions or concurrently with it (1, 2, 7). In our case, the nail involvement occurred simultaneously with skin eruptions. When LS involves proximal nail fold, it can damage the nail matrix which leads to onychodystrophy (8). Nail change in LS is nonspecific and various deformities have been reported that include fraying, longitudinal ridging and splitting, onycholysis, thinning of the nail plate, thickening of the nail plate, bluish discoloration, pitting, subungual hyperkeratosis, fissuring, leukonychia, overcurvature of the nail plate, irregular transverse grooves and rarely nail loss (1, 6, 7, 8, 9). Usually, the lateral or medial part of a single nail is affected. In the presented case, longitudinal ridging, distal splitting, and some thickening in lateral portion of the left index finger were observed.

LS should be differentiated from other linear dermatoses such as linear lichen planus (LLP), inflammatory linear verrucous epidermal nevus (ILVEN), linear psoriasis, and linear porokeratosis (1, 6, 7). LLP is a rare variant of cutaneous lichen planus preferentially affects children. The LLP lesions are typically purple, pruritic and polygonal papules with Wickham's striae on top of them. Post inflammatory hyperpigmentation is its long-lasting sequel. Nail involvement in lichen planus has diverse spectra, among them are longitudinal ridges, grooves, and less frequently pterygium and anonychia. Diagnosis is based on clinical findings, but biopsy is recommended in suspicious cases. Lichen planus nail dystrophy is

difficult to treat and usually requires systemic treatment such as oral steroid.
ILVEN is a variant of the epidermal nevus. It is characterized by unilateral, erythematous, pruritic and hyperkeratotic papules with a linear pattern. It commonly affects the lower extremity. It may present itself at birth or delayed until childhood. ILVEN generally presents with pruritic eruption. It doesn't improve spontaneously and has periods of remissions and exacerbations.
Other linear dermatoses are diagnosed by reviewing the patient's history and through physical examination. In doubtful cases skin biopsy maybe necessary.
Due to rarity of nail involvement in LS, there is no specific criterion to confirm the diagnosis of this disease; however, Inamadar proposed the following criteria for nail LS based on a survey of the available literature: longitudinal ridges and splitting localized to medial or lateral portion of nail, single nail involvement, and the presence of skin lesion near the nail (10).
Based on typical skin lesions and associated partial nail dystrophy, the presented case was diagnosed as lichen striatus with nail dystrophy. Since at least 5 months had elapsed from the appearance of disease, the improving course of lesions helped to confirm the diagnosis. Nail involvement can be isolated (11) in which diagnosis will be difficult and a nail biopsy is recommended. In recent years, onychoscopy has also been used (12,13).
LS is self-resolving and improves within a period of 6 months to 2 years. Although it does not require treatment, in some study's topical steroid, intralesional steroid, topical calcineurin inhibitors and oral cyclosporine have been used (2, 6, 7, 8, 14, 15). It seems that anti- inflammatory effect of these drugs can be effective in treatment or shortening the course of the disease. We prescribed topical triamcinolone for our patient.

4. Conclusion

We presented the case with LS onychodystrophy, because it is rare and underdiagnosed. Typical skin eruptions along with Blaschko lines and partial dystrophy of a single nail are characteristic clinical features of the disease.
It is necessary for physicians to be familiar with this rare nail disorder so that a correct diagnosis can be made and unnecessary interventions avoided.

5. Declaration

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5.2 Authors' Contributions

Data collection, investigation and writing by AS,preparation of photos and investigation by SH.

5.3 Conflict of Interest

The authors declare that they have no conflict of interest.

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