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Case Report

Bilateral lichen aureus in a 12-year-old-child, resolving after topical tacrolimus a case report with review of literature.

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ABSTRACT

A young boy presented with Lichen aureus over both the lower legs. The lesions were usually asymptomatic, but pruritus was noted occasionally. Histological examination of the lesion revealed perivascular lymphohistiocytic infiltration in the superficial dermis with extravasated erythrocytes. The boy responded for the treatment with topical Tacrolimus.

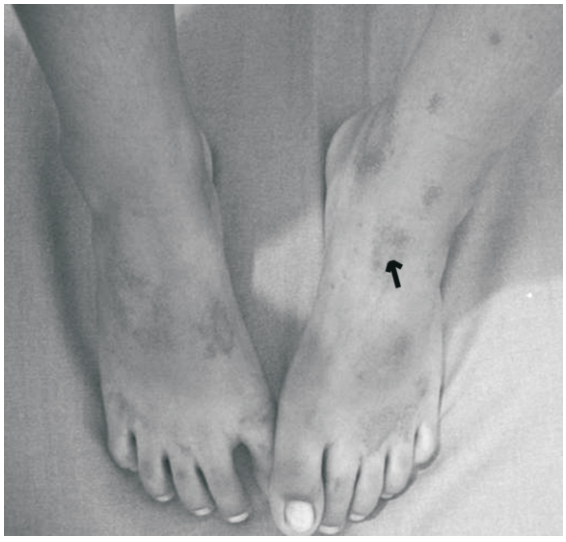
1. Introduction

Lichen aureus (LA) is rarely reported dermatosis, first described by Martin in 1958 under the description 'Lichen purpuricus'; it is classified among the pigmented purpuras [1]. Although, a marked clinical and histological overlap between the variants of this group is common, LA is considered as a distinct entity [1-7]. Young adult males are more commonly affected while LA occurs less frequently in children [8, 9]. There is no established therapy for LA. We here report a child with LA responded to topical tacrolimus.

2.Case report

A 12-year-old boy presented with multiple, bilaterally symmetrical, scattered, brownish patches over the lower legs (Figure.1) of one-year duration. There was no similar illness in the family. History of any mechanical or surgical trauma, or drug intake before the appearance of the lesions was absent. There was no other dermatologic or internal systemic abnormality. Topical application of corticosteroid ointment and emollients for 3 weeks after the appearance of the lesion produced no discernable change in the lesions. Physical examination showed multiple, round to oval, size varying between 0.8 to 1.5cms in diameter, brownish black patches. The first lesions were asymptomatic while the recent lesions had pruritus.

Figure 1: Multiple, bilaterally symmetrical, scattered, brownish patches over the lower legs.



Total and differential leukocyte counts, hemoglobin, erythrocyte sedimentation rate, platelet count, blood urea, blood sugar, liver function tests and urine analysis reports, all showed results with in normal range. No abnormality was detected in chest roentgenography and electrocardiography. Skin biopsy specimen from the lesion revealed normal epidermis with a band-like infiltrate located in the papillary dermis. The infiltrate consisted of lymphocytes and macrophages arranged in the perivascular region and also scattered in the interstitium with extravasation of red blood cells (Figure.2). In addition, some of the blood vessels in

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the papillary dermis were dilated, but more often there was endothelial swelling causing luminal narrowing (Figure.3). Occasionally there was hyaline thickening of few of the blood vessel walls. A final diagnosis of LA was considered after correlating the clinical features with the histological findings.

Figure 2. (H&E, X400): The superficial dermis shows perivascular infiltration of lymphocytes and histiocytes, and also scattered in the interstitium along with extravasation of erythrocytes.

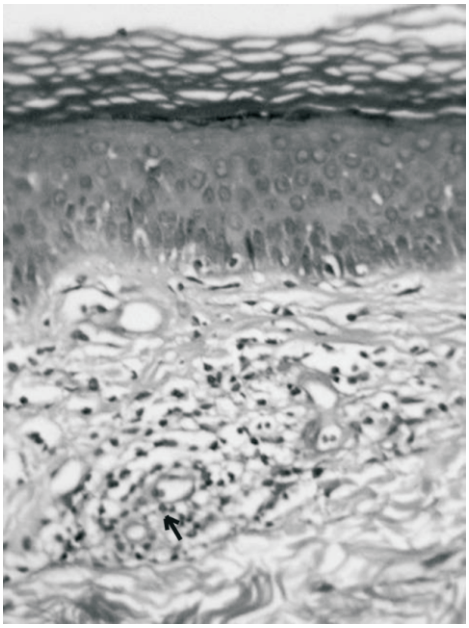
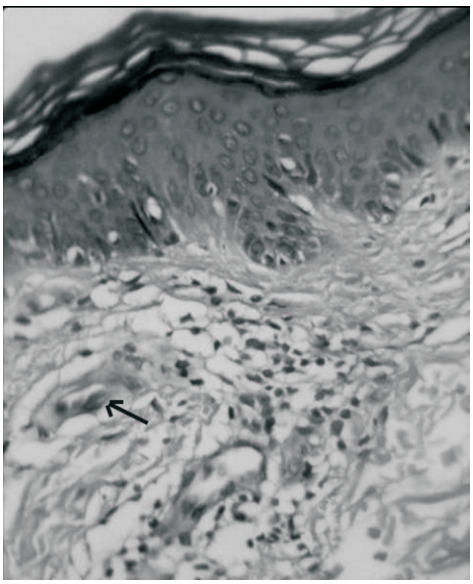
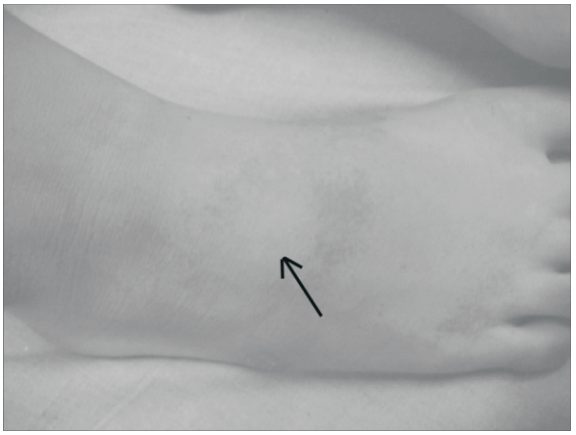


Figure 3. (H&E, X400): The papillary dermis shows dilated blood vessels with endothelial swelling causing luminal narrowing and few blood vessel walls have hyaline thickening.



After written consent, topical treatment with Tacrolimus (TOPGRAF 0.1%) cream twice daily was started. Significant improvement was noticed after one month. After 2 months, clearing of the lesions had been observed by the patient and his parents (Figure.4). Topical tacrolimus was stopped. No relapse has occurred since then. Treatment with topical tacrolimus was tolerated well and there were no side-effects.

Figure 4. Clearing of the lesions appeared after 2months of topical Tacrolimus.



3.Discussion

LA is a rare, chronic, and benign capillaritis of unknown aetiology, occurring more often in young adults than in children. It is classified in the group of pigmented purpuric eruptions [1]. Clinically LA is characterized by scattered lichenoid macules and papules. The colour of the lesions varies from golden to a rusty brown hue. The most common location for the lesions is the lower extremities, usually in a unilateral distribution, but they may be located in other areas as well [2, 4]. In our patient, the lesions were seen bilaterally in the lower legs. The lesions should be differentiated from post-traumatic bruising, drug eruptions, morphea, diabetic dermopathy and purpura [3,4]. Histologically, when compared with the other variants of the pigmented purpuras, LA shows a less abundant lymphohistiocytic infiltrate with extravasated erythrocytes in the papillary dermis and no epidermal changes; such as liquefaction, degeneration of the basal layer, or exocytosis are found [2, 7]. The aetiology of LA is unknown, but capillary fragility and the Koebner phenomenon was both demonstrated in one patient [3]. Without treatment, LA is considered to be a highly chronic dermatosis. Treatment of LA can be a challenge. Topical corticosteroids are usually ineffective [8-11], while beneficial effect of Psoralen with ultraviolet A treatment has been reported [12]. In a previous study on children with LA, five of the eight patients underwent spontaneous resolution in a period varying from 2 to 6 years (mean 3.4) [9]. In view of the rapid response, which started as early as 3 weeks after the topical application of tacrolimus cream, we believe that spontaneous resolution was unlikely in our patient. The residual brownish patches observed in our patient 12weeks after the first application of Tacrolimus may represent inert hemosiderin deposits rather than persistent inflammation. It is conceivable that the immunosuppressive activities of Tacrolimus may have induced resolution of LA in our patient [13, 14]. Notably, topical Tacrolimus does not cause skin atrophy [14]. As capillary fragility has been suggested as a causative factor for LA, topical Tacrolimus may also be suitable for prolonged therapy. Further studies are needed to confirm the beneficial effects of topical tacrolimus in LA and possibly in other pigmented purpuric dermatoses.

5.References

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