what's your diagnosis?

A 12-year-old girl with slightly pruritic bilateral nonulcerated plaques on the malleoli

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A 12-year-old girl presented with a 2-year history of slightly pruritic plaques occurring on the right lateral and left medial malleoli. She stated that the lesions had started as small papules following healing of malleolar ulcers (which occurred due to tight skates) and slowly enlarged thereafter. Physical examination revealed two skin-colored plaques of 3×2 centimeters and 1.5×2 centimeters dimension (Figure 1) overlying the right lateral and left medial malleoli re-

spectively. A cutaneous biopsy specimen was obtained from the left plaque and sent for histologic analysis (Figure 2, 3).

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Figure 1. Bilateral plaques on the malleoli.

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Figure 2. Histologic view of the lesion (H&E, 20×).

Figure 3. Histologic view of the lesion (H&E, 100×).

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Diagnosis: Hypertrophic lichen planus

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A cutaneous biopsy specimen was obtained from the left plaque and sent for histologic analysis. Histologic sections showed hyperkeratosis, irregular epidermal hyperplasia and papillomatosis with elongation of the rete ridges. There was basal cell degeneration, colloid body formation and a saw-tooth appearance to the rete ridges. Preferential involvement of the base of the elongated rete ridges by the lymphocyte-mediated interface “lichenoid” dermatitis was noted (Figure 1, 2). The patient was diagnosed as having hypertrophic lichen planus. She was prescribed topical 0.05% clobetasol propionate ointment under occlusion twice daily. Her condition significantly improved one month later.

Lichen planus is characterized by shiny, violaceous, flat-topped polygonal papules. Lichen planus lesions frequently appear along scratch marks or scars (Koebner phenomenon).¹ This explains the appearance of hypertrophic lichen planus lesions on the malleoli in our case secondary to skate-induced ulcers. Multiple variants of lichen planus are recognized. The most com-

mon variants are hypertrophic, linear, mucosal, actinic, follicular, pigmented, annular, atrophic and guttate lichen planus.²

Hypertrophic lichen planus usually develops during the course of a subacute attack, but occasionally only hypertrophic or warty lesions are found. It most often occurs on the lower limbs, especially around the ankles.¹ Hypertrophic lesions persist for many years.³ When such lesions eventually clear, an area of pigmentation and scarring may remain and there is often some degree of atrophy.¹ Hypertrophic scars, keloids, callosities, and prurigo nodularis are the main differential diagnoses. Increased serum levels of P-selectin in patients with lichen planus are detected. P-selectin plays an essential role in leukocyte rolling in vivo and therefore may be a key participant of the inflammatory response.⁴

Hypertrophic lichen planus must be distinguished from lichen simplex chronicus and lichen amyloidosis.¹ Neoplastic changes are a rarely reported complication of hypertrophic lichen planus.³ Verrucous squamous cell carcinoma developing in hypertrophic lichen planus has

Figure 1. Histologic section showing hyperkeratosis, acanthosis and papillomatosis, elongation of the rete ridges, basal cell degeneration, and saw-tooth appearance of the rete ridges. Band-like infiltration of the lymphocytes beneath the epidermis is also present (H&E, 20×).

Figure 2. Close-up histologic view showing the important pathologic features.

been reported,⁵ which indicates that the long-standing hypertrophic form of lichen planus has a considerable propensity for malignant transformation, even in young patients.⁶

Histologic examination of a lichen planus lesion shows irregular acanthosis of the epidermis and thickening of the granular layer with compact hypergranulosis. Basal cell degeneration, Civatte body formation, a saw-tooth appearance to the rete ridges, and a band-like infiltration of lymphocytes and histocytes are other his-

topathologic findings.^{1,7}

In hypertrophic lichen planus, the epidermis may show a pseudoepitheliomatous appearance with extreme irregular acanthosis. The infiltrate may not appear very band-like, but serial sections will usually show focal areas of basal cell liquefaction and colloid body formation.¹ In hypertrophic lichen planus, lesions may be treated using an occlusive dressing of tar or flurandrenolone tape, or using topical steroid preparations under polythene occlusion.¹

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