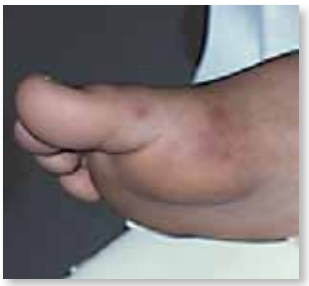
Answer to Dermacase *continued from page 666*

2. Palmoplantar eccrine hidradenitis



First described in 1988, palmoplantar eccrine hidradenitis (PEH) is an uncommon, benign, self-limiting, distinctive entity that usually affects healthy children and young adults, with a slight female predominance.[1-4] It is characterized clinically by the abrupt onset of erythematous, tender nodules mostly on the soles of the feet (leading to considerable difficulty walking), with or without palmar involvement.[2-4] There might be associated low-grade fever, as was the case in our patient. The eruption usually resolves spontaneously within 1 to 4 weeks, but relapses do commonly occur.[2,4] Histology of PEH usually reveals a superficial and deep perivascular and perieccrine, predominantly neutrophilic, inflammatory cell infiltrate. Degenerative changes in the eccrine apparatuses consisting of vacuolization, edema, and scattered cell necrosis might also be noted. These histologic findings were present in our patient and confirmed the clinical diagnosis.

The underlying pathogenesis of PEH is still not clear. Local thermal or mechanical trauma, sweating, moisture, intense physical activity, recent streptococcal infection, and hypersensitivity reaction have all been suspected to play a role.[2,4] One or more of these factors can result in eccrine gland rupture, leading to a cascade of reactions that attracts neutrophils to the site.[4]

Differential diagnosis

The clinical differential diagnosis of PEH includes erythema multiforme, chilblain, and cellulitis. Erythema multiforme is an acute, self-limiting, and occasionally recurrent skin condition. It presents clinically as targetoid lesions, mainly over the face and acral sites, with minimal mucosal involvement. It is thought to be a hypersensitivity reaction to certain infections (eg, herpes simplex virus, mycoplasma) or medications (eg, phenothiazine, nonsteroidal anti-inflammatory drugs, penicillin, sulfonamide).[5] Chilblain is an inflammatory skin condition presenting clinically as pruritic or painful, erythematous to violaceous, acral papules or nodules after exposure to cold. It can be idiopathic or secondary to an underlying disorder, such as cryoglobulinemia or cold agglutinins. It commonly resolves in 2 to 3 weeks.[6] Cellulitis is a painful, erythematous, bacterial infection of the dermis and subcutaneous tissues, which manifests as poorly demarcated, swollen, warm, and erythematous patches or plaques with advancing borders. It most commonly occurs over the legs and digits, followed by the face. Patients might have associated fever and leukocytosis. Commonly, cellulitis is preceded by a port of entry into the skin due to surgical wounds, trauma, or macerations. Treatment is with oral antibiotics.[7]

Management

Management of PEH should initially stress bed rest, which might lead to a decrease in sweat secretion and therefore a gradual decrease in the inflammation.[4] After resolution of the lesions, normal activity can be resumed gradually. There is not yet much evidence to support the use of antibiotics, nonsteroidal anti-inflammatory drugs, or topical or systemic steroids.[2-4] Our patient had an extensive laboratory workup, including a complete blood count; measurement of erythrocyte sedimentation rate, C-reactive protein, antinuclear antibodies, and rheumatoid factor; echocardiography; x-ray scans of the feet and chest; and blood cultures. His test results were completely normal, except for an indication of mild leukocytosis. The child was treated with bed rest and antipyretics. His skin lesions resolved completely in 9 days.

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Competing interests
None declared

References

1. Metzker A, Brodsky F. Traumatic plantar urticaria—an unrecognized entity? *J Am Acad Dermatol* 1988;18(1 Pt 1):144-6.
2. Simon M Jr, Cremer H, von den Driesch P. Idiopathic recurrent palmoplantar hidradenitis in children. Report of 22 cases. *Arch Dermatol* 1998;134(1):76-9.
3. Landau M, Metzker A, Gat A, Ben-Amitai D, Brenner S. Palmoplantar eccrine hidradenitis: three new cases and review. *Pediatr Dermatol* 1998;15(2):97-102.
4. Rubinson R, Larralde M, Santos-Muñoz A, Parra V, de Parra NP. Palmoplantar eccrine hidradenitis: seven new cases. *Pediatr Dermatol* 2004;21(4):466-8.
5. Lamoreux MR, Sternbach MR, Hsu WT. Erythema multiforme. *Am Fam Physician* 2006;74(11):1883-8.
6. Simon TD, Soep JB, Hollister JR. Pernio in pediatrics. *Pediatrics* 2005;116(3):e472-5.
7. Stulberg DL, Penrod MA, Blatny RA. Common bacterial skin infections. *Am Fam Physician* 2002;66(1):119-24.