Spreading Painful Lesions on the Legs

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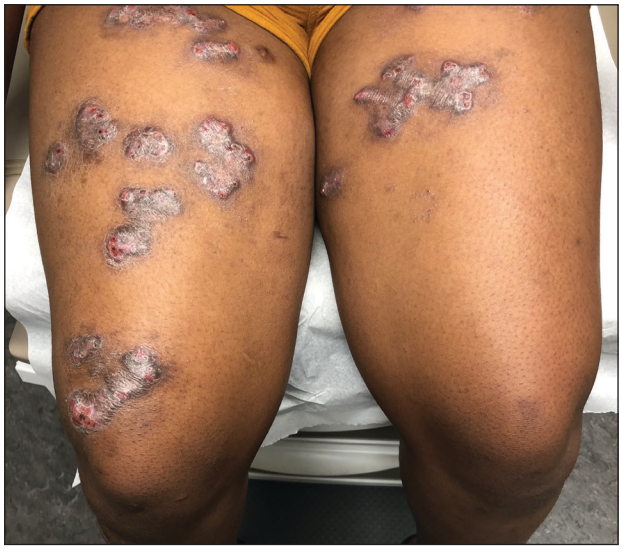

A 14-year-old adolescent girl presented with spreading painful lesions on the legs and left forearm of 2 years' duration. Her travel history included several countries in South and Central America, traversing the Colombian jungle on foot. Near the end of the jungle trip, she noted a skin lesion on the left forearm around the site of an insect bite. Within 1 month, the lesions spread to the legs. She was treated with topical corticosteroids without improvement. Physical examination revealed verrucous, reddish-brown plaques on the legs and left forearm. Intranasal examination revealed a red rounded lesion inside the left nostril.

WHAT'S YOUR **DIAGNOSIS?**

a. cutaneous leishmaniasis
b. cutaneous tuberculosis
c. deep cutaneous fungal infection
d. granuloma inguinale
e. pemphigus vegetans

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THE **DIAGNOSIS:** Cutaneous Leishmaniasis

A punch biopsy of the skin showed pseudoepitheliomatous hyperplasia of the epidermis with dermal granulomatous and suppurative inflammation; tissue cultures remained sterile. Polymerase chain reaction testing of the skin revealed the presence of *Leishmania guyanensis* complex. Leishmaniasis is a widespread parasitic disease transmitted via sandflies that often is seen in children and young adults.[1] Although leishmaniasis is endemic to several countries within Southeast Asia, East Africa, and Latin America, an increase in international travel has brought the disease to nonendemic regions. Therefore, it is crucial to obtain a detailed history of travel and exposure to sandflies in patients who have recently returned from endemic regions.

Leishmaniasis may present in 3 forms: cutaneous, mucocutaneous, or visceral. Cutaneous clinical findings vary depending on disease stage, causative species, and host immune activation. Presentation following a sandfly bite typically includes a papule that progresses to an erythematous nodule. Cutaneous leishmaniasis commonly occurs in areas of the body that are easily accessible to sandflies, such as the face, neck, and limbs. Mucocutaneous leishmaniasis presents with nasal or oral involvement several years after the onset of cutaneous leishmaniasis; however, it can coexist with cutaneous involvement. Without treatment, mucocutaneous leishmaniasis may lead to perforation of the nasal septum, destruction of the mouth, and life-threatening airway obstruction.[1] Determining the specific species is important due to the variation in treatment options and prognosis. Because *Leishmania* organisms are fastidious, obtaining a positive culture often is challenging. Polymerase chain reaction can be utilized for identification, with detection rates of 97%.[1] Systemic treatment is indicated for patients with multiple or large lesions; lesions on the hands, feet, face, or joints; or immunocompromised patients. Antimonial drugs are the first-line treatment for most forms of leishmaniasis, though increasing resistance has led to a decrease in efficacy.[1] Our patient ultimately was treated with 4 weeks of miltefosine 50 mg 3 times daily. She obtained full resolution of the lesions with no further treatment indicated.

Pemphigus vegetans may present with various clinical manifestations that often can lead to a delay in diagnosis. The Hallopeau subtype typically presents as pustular lesions, while the Neumann subtype may present as large vesiculobullous erosive lesions that rupture and form verrucous, crusted, vegetative plaques. The groin, inguinal folds, axillae, thighs, and flexural areas commonly are affected, but reports of nasal, vaginal, and conjunctival involvement also exist.[2]

Granuloma inguinale is a sexually transmitted ulcerative disease that is caused by infection with *Klebsiella granulomatis*. It typically is found in tropical and subtropical climates, including Australia, Brazil, India, and South Africa. The initial presentation includes a single papule or multiple papules or nodules in the genital area that progress to a painless ulcer. It can be diagnosed via biopsies or tissue smears, which will demonstrate the presence of inclusion bodies known as Donovan bodies.[3]

Cutaneous tuberculosis (TB) can have variable clinical presentations and may be acquired exogenously or endogenously. Cutaneous TB can be divided into 2 categories: exogenous TB caused by inoculation and endogenous TB due to direct spread or autoinoculation. Exogenous TB subtypes include tuberculous chancre and TB verrucosa cutis, while endogenous TB includes scrofuloderma, orificial TB, and lupus vulgaris.[4] Patches and plaques are found in patients with lupus vulgaris and TB verrucosa cutis. Scrofuloderma, tuberculous chancre, and orificial TB can present as ulcerative or erosive lesions. Cutaneous TB infection can be diagnosed through a smear, culture, or polymerase chain reaction.[4]

Deep cutaneous fungal infections most commonly present in immunocompromised individuals, particularly those who are severely neutropenic and are receiving broad-spectrum systemic antimicrobial agents. Deep cutaneous fungal infections initially present as a papule and evolve into a pustule followed by a necrotic ulcer. The lesions typically are accompanied by a fever and/or vital sign abnormalities.[5]

REFERENCES

1. Pace D. Leishmaniasis [published online September 17, 2014]. *J Infect*. 2014;69(suppl 1):S10-S18. doi:10.1016/j.jinf.2014.07.016
2. Messersmith L, Krauland K. Pemphigus vegetans. *StatPearls*. StatPearls Publishing; 2022.
3. Ornelas J, Kiuru M, Konia T, et al. Granuloma inguinale in a 51-year-old man. *Dermatol Online J*. 2016;22:13030/qt52k0c4hj.
4. Chen Q, Chen W, Hao F. Cutaneous tuberculosis: a great imitator. *Clin Dermatol*. 2019;37:192-199.
5. Marcoux D, Jafarian F, Joncas V, et al. Deep cutaneous fungal infections in immunocompromised children. *J Am Acad Dermatol*. 2009;61:857-864.