

Hansen Disease (Leprosy)



Matthew W. McEwen, MD, and Tejesh S. Patel, MD

A 77-year-old man with psoriatic arthritis, on methotrexate, presented with asymptomatic skin lesions. He denied altered sensation within the lesions and history of international travel, but he reported previously cleaning out suspected armadillo burrows. Physical examination revealed pink, smooth, annular, and cyclic papules and plaques on the extremities and back (Figures 1 and 2). Histopathology showed clusters of acid-fast staining organisms within foamy histiocytes in the dermis (Supplemental Figure, available online at <http://www.mayoclinicproceedings.org>). Tissue polymerase chain reaction was positive for *Mycobacterium leprae*, confirming the diagnosis of Hansen disease. Based on clinical and histopathological findings, the patient was classified as having borderline lepromatous disease. Treatment for multibacillary disease with clofazimine, dapsone, and rifampin was initiated for a planned 24-month course, with near resolution of skin lesions after 6 weeks.

Hansen disease, or leprosy, is caused by infection with *Mycobacterium leprae*, an acid-fast staining, obligate intracellular organism.¹ Most cases are seen in India, Brazil, and Indonesia, although the nine-banded

armadillo is a zoonotic reservoir for *M. leprae* in the United States.^{1,2} Risk factors for infection demonstrated in our case include age above 50, exposure to armadillos, and immunosuppressed status.^{1,3,4} Hansen disease classically presents with cutaneous and neurologic findings ranging from solitary or few annular plaques with lesional anesthesia to diffuse macules, papules, and skin infiltration with stocking-glove neuropathy.¹ Disease can be categorized along a polar spectrum ranging from tuberculoid to lepromatous disease, using the Ridley and Jopling classification system.¹ Treatment is with rifampin and dapsone +/- clofazimine for 6 to 24 months, depending on whether the disease is paucibacillary or multibacillary.^{5,6}



From the Kaplan-Amo-
nette Department of
Dermatology, University
of Tennessee Health Sci-
ence Center, Memphis,
TN.

SUPPLEMENTAL ONLINE MATERIAL

Supplemental material can be found online at <http://www.mayoclinicproceedings.org>. Supplemental material attached to journal articles has not been edited, and the authors take responsibility for the accuracy of all data.

Funding Sources: The authors report no funding sources for this article.



FIGURE 1. Annular and cyclic pink papules and plaques on the thigh.



FIGURE 2. Annular pink plaque on the lower back.

Potential Competing Interests: The authors report no competing interests.

Correspondence: Address to Matthew W. McEwen, MD, University of Tennessee Health Science Center Kaplan-Amonette Department of Dermatology, 930 Madison Avenue, Suite 840, Memphis, TN 38163 (E-mail: mmcewen2@uthsc.edu).

ORCID

Matthew W. McEwen:  <https://orcid.org/0000-0002-6002-6945>

1. Maymone MBC, Laughter M, Venkatesh S, et al. Leprosy: clinical aspects and diagnostic techniques. *J Am Acad Dermatol*. 2020; 83(1):1-14.
2. World Health Organization. Global leprosy update, 2018: moving towards a leprosy free world. *Wkly Epidemiol Rec*. 2019; 94(35/36):389-411.
3. Teixeira CSS, Pescarini JM, Silva R de CR. Incidence of and factors associated with leprosy among household contacts of patients with leprosy in Brazil. *JAMA Dermatol*. 2020;156(6):1-10.
4. Trindade MA, Palermo ML, Pagliari C, et al. Leprosy in transplant recipients: report of a case after liver transplantation and review of the literature. *Transpl Infect Dis*. 2011;13(1):63-69.
5. Health Resources and Services Administration. *NHDP Guide to the Management of Hansen's Disease*. Available at: <https://www.hrsa.gov/sites/default/files/hrsa/hansens-disease/pdfs/hd-guide-management.pdf>. Accessed October 3, 2020.
6. World Health Organization, Regional Office for South-East Asia. *Guidelines for the diagnosis, treatment and prevention of leprosy*. World Health Organization, Institutional Repository for Information Sharing; 2018.