

## SHORT COMMUNICATION

## Leaping over Leprosy

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Leprosy, also known as Hansen's disease, is a systemic illness caused by *Mycobacterium leprae*.<sup>1</sup> The skin and the peripheral nervous system are the two major organ systems affected.<sup>1</sup> While leprosy is still extensively taught in medical schools, it has been nearly unseen for the past twenty years largely due to intensive eradication methods including exiling leprosy-positive individuals to United States Public Health Service Hospitals in isolated areas as the Hawaiian island Molokai and Carville, Louisiana.<sup>2</sup> These hospitals have long been closed down, yet their impact lives on. Dermatologists should re-familiarize themselves with the cutaneous manifestations of leprosy due to the recent outbreak in Central Florida.<sup>1</sup> According to the National Hansen's Disease Program, there were 159 new cases reported in the United States in 2020, with Florida being among the top reporting state, especially Central Florida.<sup>1</sup> 81% of cases reported in Florida originated in Central Florida.<sup>1</sup>

Because of leprosy's wide-ranging presentation, there are various classification systems. Nevertheless, a dermatologist should suspect leprosy in a patient presenting with large hypopigmented or erythematous lesions with clear demarcation and raised margins.<sup>3</sup> Other possible presentations of leprosy include scaly plaques, targetoid macules, diffuse erythematous macules, nodules, or papules.<sup>3</sup>

Findings concerning for advanced leprosy include lesional sensory loss, hair loss (especially the eyebrows and eyelashes), nodular enlargement of earlobes, or a perforated nasal septum.<sup>3</sup> If a dermatologist suspects leprosy, a skin biopsy with histopathological analysis should be performed immediately.<sup>4</sup> The histopathology of leprosy is dependent on the cellular immune response to the *Mycobacterium leprae* bacteria.<sup>3</sup> A finding that supports the histopathological diagnosis of leprosy is granulomatous infiltration of the dermis and subcutaneous fat with acid-fast bacilli.<sup>3</sup> Vacuolar macrophages, plasma cells, and lymphocytes may also be present.<sup>3</sup>

Other valuable tools to aid in the diagnosis of leprosy include a lepromin skin test, PCR tests, and serology to look for antibodies against the phenolic glycolipid antigen.<sup>4</sup> Referrals to neurology and infectious disease may also be warranted, and reporting to a local or national health department is mandatory.<sup>1</sup>

Dermatologists must be mindful of this increasing problem, especially given that Central Florida is one of the largest tourist hubs worldwide. Central Florida consists of attractions including Disney World, Universal Studios, SeaWorld, and the Kennedy Space Center. Additional associations to be aware of include exposure to armadillos and

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immunosuppression.<sup>1,3,4</sup> Other risk factors may include immigration or exposure to individuals who immigrated from Haiti, though the evidence to support this is anecdotal.<sup>5</sup>

Central Florida has the potential to become an epicenter for leprosy spread. Dermatologists can play a crucial role in decreasing the transmission of this devastating illness. Central Florida is home to the happiest place on earth, and it must stay that way. While exiling people to faraway islands slowed the spread of leprosy in the early 1900s, it was not without consequences.<sup>2</sup> Families were forever torn apart; a leprosy-positive individual wouldn't even have the opportunity to say goodbye to their loved ones.<sup>2</sup> With a keen clinical awareness, dermatologists have the opportunity to prevent such a heartbreak from occurring again.

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