The patient was a 53-year old male, originally from Trinidad, with a history of exposure and consumption of Armadillos. His clinical history was significant for diabetes and peripheral neuropathy. He presented to his dermatologist complaining of slowly enlarging diffuse nodular bilateral ear lesions (Figure 1A & B). His only other dermal symptom was a 4cm hypo-pigmented patch on the left flank. Clinically, sarcoidosis or otomycosis were suspected and a routine biopsy was performed.

**Diagnosis:**
A biopsy of a lesion on the patient’s left ear revealed a diffuse dermal lymphohistiocytic infiltrate containing numerous globi filled with acid fast bacilli, consistent with Leprosy (Figure 2)
Discussion:

Leprosy or Hansen’s Disease is a chronic bacterial infection caused by mycobacterium leprae. This disease has afflicted humans for thousands of years and historically was among the most dreaded scourges of mankind. Despite its fearsome reputation, leprosy is not highly transmissible in humans. Infection typically only occurs following prolonged exposure and then only in susceptible individuals\(^1\). Susceptibility is believed to result from defects in cell-mediated immunity. Skin lesions are the primary external manifestation of this infection and vary depending on the type of immune response in the host. In addition to affecting humans, leprosy is also known to occur in armadillos and in some primate species\(^2\). Leprosy is endemic in parts of Africa, South America and Asia. However, it is rare in Australia. The relative rarity of leprosy means that it is not always high in the differential of clinicians treating patients with neuropathic symptoms and may remain undiagnosed for prolonged periods.

The patient, in the present case most likely contracted leprosy through exposure to armadillos, one of the few non-human species known to harbor this disease. Early manifestations of leprosy when combined with other neuropathic diseases such as diabetes can pose severe diagnostic challenges for clinicians.

Leprosy is commonly classified as tuberculoid (paucibacillary), borderline or lepromatous (mucituberculoid). The tuberculoid form is believed to occur when Th1-mediated cellular immune responses predominate\(^3\) and manifests as one or more hypopigmented skin macules and anaesthetic patches. At the other extreme, lepromatous leprosy is believed to occur when Th2-mediated immune responses predominate and is characterized by symmetric skin lesions including nodules and plaques, with frequent involvement of the nasal mucosa. However, patient’s symptoms can lie anywhere in the spectrum between the tuberculoid and lepromatous forms. The patient in the present case had symptoms representing an early lepromatous form of the disease.

Although leprosy is rare this case highlights the need to keep leprosy in the differential diagnosis for patients presenting with neuropathic and cutaneous symptoms, particularly for migrants from regions where leprosy is endemic.

References:


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