Rash with Neuropathy Refractory to Medical and Surgical Therapies - a Case Report

Erez Minka, DO1; Sarah Minka, DO2
1Bay Area Medical Center - Corpus Christi, 2Portland Dermatology

Abstract

Patient was a 63 year old male with an extensive history of worsening neurological symptomatology refractory to medical and surgical care presents with a collection of non-pruritic, erythematous plaques and papules distributed about the proximal upper and lower extremities. This rash had failed anti-fungal and topical over-the-counter medications in the recent past. Biopsy was performed, demonstrating a granulomatous dermatitis with numerous acid-fast bacilli. PCR studies were conducted, verifying the presence of Mycobacterium Leprae. Patient was started on triple therapy with rifampin, clofazamine, and dapsone. At 6-month followup, patient was responding favorably to treatment.

Patient Presentation

Our patient was a 63 year old caucasian male rancher, presenting to dermatology clinic complaining about a largely “asymptomatic” yet persistent rash to his bilateral proximal extremities. Patient failed attempts at home remedy with over the counter medications, so he visited his primary care provider. Patient was placed on anti-fungal medications, and there was no improvement. Pertinent history of this patient includes being diagnosed as pre-diabetic, as well as a 6 year history of steadily worsening peripheral neuropathy. Paresthesias and radicular pain was admittedly prevalent in the upper extremities more-so than lower. Patient was seeing a neurologist for much of this time, yet the symptoms had progressed to a degree that was unmitigated by medical therapies. The patient was referred for surgical decompression of his left cubital tunnel, as well as carpal tunnel, and eventually when symptoms persisted, a single level partial laminectomy and discectomy to decompress a cervical nerve root. At time of presentation, patient already had performed routine bloodwork for his primary care physician, all within normal limits aside from a glucose of 114. Patient denies any history of immunosuppression or constitutional symptoms associated with the presenting rash. He also denies any travel outside of the country.

Physical Examination

Visual inspection was performed of the head, neck, torso, and extremities. Patient was alert, oriented, well nourished and was not in any immediately apparent distress. Multiple circinate and geometric erythematous papules and plaques were present, distributed about the proximal upper and lower extremities. Lesional distribution/density appears greater on the left upper extremity than on the remaining 3 extremities. There are no clinically appreciable hair or nail changes on exam. Sensation is in tact to light touch throughout the proximal and distal extremities, and capillary refill is brisk.

Diagnosis and Treatment

A 4.0 mm punch biopsy was performed of a papule on the left proximal upper extremity, and the wound was approximated with a 5-0 Chromic gut suture. Differential diagnosis included drug eruption to a recently started lisinopril, tinea corporis, psoriasis, nummular eczema, as well as granuloma annulare.

Initial dermatopathology interpretation of the biopsy demonstrated a superficial and deep lichenoid inflammatory cell infiltrate with both lymphocytes and histiocytes. GMS stain was negative for fungi, treponema immunostain was negative for presence of spirochetes, but there were numerous bacilli visible with Acid-Fast staining. The biopsy specimen was forwarded for PCR analysis to identify the organism. AFB PCR studies confirmed the presence of Mycobacterium Leprae.

Patient was started on multi drug therapy for leprosy, with Rifampin, Clofazimine, and Dapsone. As of 6-month followup, cutaneous lesions have greatly resolved. As is typical with disease course in leprosy, areas of hypoesthesias and neuropathic pain persist. Pain management is being explored with some degree of success. Fortunately, patient denies further progression of neurological symptoms.

Discussion

As we find is true throughout all of medical history taking, it is often times fruitless to inquire about the patient’s life without making requests that are exceedingly specific. Despite being asked about traveling and exposure to exotic plants and/or wildlife, it was not until the primary biopsy results returned that the patient was asked about exposure to armadillos. Not only had the patient admitted to handling armadillos several times, he uncovered a history of leprosy in his father. His father has been deceased for over 2 decades, unfortunately, so the history was limited. But as possible as it is that our patient contracted M. Leprae from direct contact with an armadillo, it is equally possible that our patient had inhaled contagious respiratory droplets from his father and became inoculated. In a case such as this, where neurologic symptoms evolve alone, years before any cutaneous sign of leprosy presents, patients and physicians embark upon a frustrating sequence of trial and error.

Conclusions

Educating primary providers and specialists regarding the presentation of regional infectious disease may allow for the addition of several items to each patient’s differential diagnosis. Once considered, these possible diagnoses may guide the physician to ask a specific enough question that not only solves the diagnostic mystery, but also recovers months to years of a patient’s life from cycling through the health care system.

Contact

[Erez Minka, DO]
[ Resident Physician, Dermatology]
[Bay Area Medical Center- Corpus Christi/ Texas OPTI]
[erez.minka@gmail.com]