INFECTIOUS DISEASES (BACTERIAL, FUNGAL, VIRAL, PARASITIC, INFESTATIONS)

A CASE OF CUTANEOUS TUBERCULOSIS PRESENTING WITH GENERALIZED XANTHOGRANULOMAS

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Background: Xanthomatous lesions in adults are common in the setting of dyslipidemia. In a normolipemic individual, these are said to be a reactive granulomatous response of histiocytes to infection, physical stimuli, and various diseases and their treatment. Hematologic malignancies are the most reported association. This study explores a possible association with tuberculosis.

Observation: A 33-year-old male had generalized pruritic papules that waxed and waned for 22 years. They became persistent over the past year. Histopathology of the skin-colored papule on the arm and yellow papule on the face were consistent with xanthogranulomas. Lipid profile was normal. He also had movable and non-tender lymphadenopathy. Ultrasound-guided biopsy of the inguinal node showed chronic inflammation. Complete blood count, peripheral blood smear and holoabdominal ultrasound did not point to an underlying hematologic malignancy. He also had a three-month history of ulcerated plaques on the back and left arm that would heal in certain portions then develop ulcerations in other areas. Histopathology showed granulomatous dermatitis. Fite stain was positive but slit-skin smear was negative, thus ruling out leprosy. Although bacterial, mycobacterial, and fungal cultures of ulcer tissue were negative, TB PCR was positive confirming the diagnosis of cutaneous tuberculosis. Chest x-ray showed changes of pulmonary tuberculosis with cicatricial changes. The patient was started on a regimen of Isoniazid-Rifampicin-Pyrazinamide-Ethambutol and Streptomycin with improvement of ulcerated lesions. Xanthogranulomas persisted but no new lesions developed.

Key Message: The dendrocytes involved in xathogranulomas share a common CD14+ precursor with the macrophages that are integral in the immune response to tuberculosis. GM-CSF and TNF-alpha, noted to be elevated in tuberculosis patients, are needed to stimulate production of dendrocytes in xanthogranulomas. Continued production of cytokines stimulate production of xanthogranulomas. Hence, in a normolipemic adult presenting with xanthogranulomas, investigation of underlying infectious conditions should be considered along with hematologic malignancies.