Papulonecrotic tuberculid

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A 48-year-old woman presented to an outpatient clinic in Chengdu, China, with a 6-year history of recurring lesions on her trunk and extremities. The lesions began as 2- to 10-mm purplish-red papules and pustules, which developed necrosis and crusting, and then resolved spontaneously within 4 weeks, leaving atrophic varioliform scars (Figure 1). The lesions recurred irregularly with no pruritus or pain. She denied weight loss, chronic cough or fever. We performed a skin biopsy of a lesion, which showed lymphocytic vasculitis associated with fibrinoid necrosis and thrombotic occlusion of individual vessels (Appendix 1, supplemental figure, available at www.cmaj.ca/lookup/doi/10.1503/cmaj.231460/tab-related-content). To exclude infectious dermatoses, acid-fast staining and metagenomic next-generation sequencing of lesional samples were completed and results were negative. Given the local estimated incidence of tuberculosis (52 per 100 000), we performed a chest computed tomography, which showed multifocal calcified nodules in both lungs, suggesting a history of pulmonary tuberculosis. An interferon-γ release assay of *Mycobacterium tuberculosis* was positive, confirming latent tuberculosis infection. We diagnosed papulonecrotic tuberculid and started a 6-month regimen that included 2 months of isoniazid, rifampicin, pyrazinamide and ethambutol and 4 months of isoniazid and rifampicin. The patient had no new lesions within 2 months and recovered fully after 6 months.

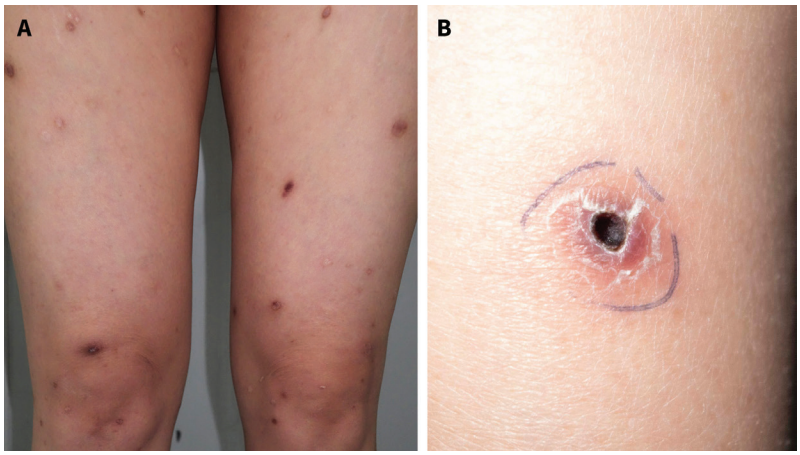

Figure 1: (A) Multiple purplish-red papulonodular or papulopustular lesions with necrosis and crusting on the extremities of a 48-year-old woman, which resolved into (B) atrophic varioliform scars.

Cutaneous tuberculosis can occur as both true tuberculosis and tuberculids. Tuberculids are hypersensitivity reactions to mycobacterial antigens with little intralesional mycobacteria.[1] A tuberculid is an immunological response to degenerated *M. tuberculosis* or their antigenic fragments from occult or inapparent tuberculosis elsewhere in the body.[2] Papulonecrotic tuberculid is an uncommon type of tuberculid, and predominantly affects young, immunocompetent people.[1,2] Histopathology is crucial for diagnosis and typically shows vasculitis, vascular occlusion with fibrinoid necrosis, and wedge-shaped necrosis of the superficial dermis without tuberculoid granulomas.[2,3] Even when papulonecrotic tuberculid is suspected, diagnosis can be challenging since acid-fast staining of lesions is usually negative and polymerase chain reaction testing for *M. tuberculosis* has a low positivity rate.[2] Other helpful diagnostic clues include evidence of current or past tuberculosis infection, a strongly positive result on a tuberculin skin test and a positive result on an interferon-γ release assay of *M. tuberculosis.* Papulonecrotic tuberculid generally responds well to standard antituberculosis treatment.[2,3]

References

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