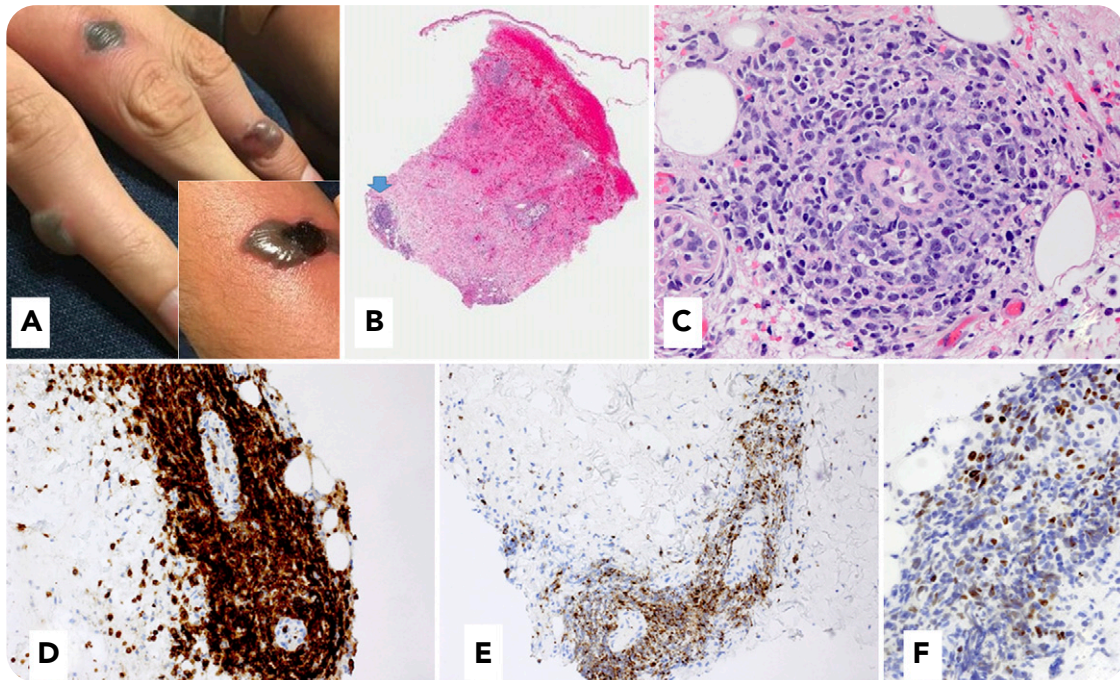


Severe mosquito bite allergy: an unusual EBV⁺ NK cell lymphoproliferative disorder

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A 14-year-old Hispanic youth was in good health until the onset of skin lesions, which started in the left leg following a mosquito bite, and then spread to involve both legs and upper extremities. The lesions consisted of discrete hemorrhagic bullae, which progressed to eschars, and eventually healed with scar formation. They were accompanied by low-grade fever. Panel A shows bullous lesions and a necrotic eschar on the hand and a similar lesion on the arm (inset). Skin punch biopsy (panel B; original magnification $\times 20$, hematoxylin and eosin stain) revealed necrosis of the epidermis and underlying dermis, as well as perivascular atypical lymphoid aggregates (arrow) in the deep dermis. The perivascular lymphoid cells were predominantly large with prominent nuclei, admixed with smaller irregular lymphoid cells (panel C; original magnification $\times 400$, hematoxylin

and eosin stain). Immunohistochemical stains on serial sections were positive for CD3 (panel D; original magnification $\times 400$, hematoxylin counterstain) and cytotoxic marker granzyme B (panel E; original magnification $\times 200$, hematoxylin counterstain), but were negative for CD56. Epstein-Barr virus (EBV) encoding region was positive in the large cells (panel F; original magnification $\times 400$, hematoxylin counterstain).

Severe mosquito bite allergy is a rare but potentially serious form of hypersensitivity to mosquito gland secretions, which causes T-cell activation. The patient was given supportive therapy and discharged, but in this condition, there is increased risk of progression to chronic active EBV infection, hemophagocytic syndrome, and natural killer (NK)/T-cell lymphoma.