A Curious Case of a Zoonotic Microorganism-induced Blister: Can Electron Microscopy Solve the Mystery?

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Abstract

This is a curious case of a microorganism-induced blister.

The patient is a 71 yo female with a remote history of breast cancer, but otherwise healthy. She presented to the dermatologist with a lesion on the left thumb near the nail bed. Of significance, the patient frequently visits a rural farm where she buys eggs. She is also very fond of and in close contact with the many roaming goats on the farm.

The lesion became a blister and was biopsied at the blister phase.

The punch biopsy demonstrates a blister with scale with ballooning degeneration of the epidermis with epidermal necrosis and discrete small eosinophilic inclusions. In the context of the clinical impression, the findings are most suspicious for Orf.

However, Electron microscopy ultrastructural findings are ambiguous!

The lesion spontaneously resolved in the course of ~6 weeks.

We will discuss the diagnostics of poxvirus, its mimickers, and culprits to be aware of.