Persistent rash on the sole

The patient’s immune status offered a clue to the diagnosis

A 52-year-old Chinese woman presented to a tertiary hospital in Singapore with a 3-month history of persistent and intermittently painful rashes over her right calf and foot (FIGURE). The patient had pancytopenia due to ongoing chemotherapy for metastatic nasopharyngeal carcinoma. She was systemically well and denied other dermatoses. Examination demonstrated scattered crops of tense hemorrhagic vesicles, each surrounded by a livid purpuric base, over the right plantar aspect of the foot, with areas of eschar over the right medial hallux. No allodynia, hyperesthesia, or lymphadenopathy was noted.

A punch biopsy of an intact vesicle was performed.

WHAT IS YOUR DIAGNOSIS?

HOW WOULD YOU TREAT THIS PATIENT?
vesicles mimicking vasculitic lesions, which had persisted over a 3-month period with intermittent localized pain. It has been proposed that in atypical presentations, the reactivated VZV spreads transaxionally from adjacent nerves to the outermost adventitial layer of the arterial wall, leading to a vasculitic appearance of the vesicles. Viral-induced vasculitis may also result either directly from infection of the blood vessels or secondary to vascular damage from an inflammatory immune complex–mediated reaction, cell-mediated hypersensitivity, or inflammation due to immune dysregulation.

Differential includes vesiculobullous conditions

There are several important items to consider in the differential.

- **Cutaneous vasculitis**, in severe cases, may manifest with vesicles or bullae that resemble the lesions seen in HZ. However, its unilateral nature and distribution distinguish it.

- **Angioinvasive fungal infections** in immunocompromised patients may manifest with scattered ulceronecrotic lesions to purpuric vesiculobullous dermatoses. However, no fungal organisms were seen on GMS staining of the biopsied tissue.

- **Atypical hand-foot-and-mouth disease** tends to affect adults and is associated with Coxsackievirus A6 infection. It may manifest as generalized vesiculobullous exanthem resembling varicella. The chronic nature and restricted extent of the patient’s rash made this diagnosis unlikely.

Successful management depends on timely identification

Although most cases of HZ can be diagnosed clinically, atypical rashes may require a biopsy and direct immunofluorescence assay for VZV antigen or a polymerase-chain-reaction (PCR) assay for VZV DNA in cells from the base of blisters. Therefore, it is important to consider the diagnosis of HZ in immunocompromised patients presenting with an atypical rash to avoid misdiagnosis and costly testing.

Our patient was treated with oral acyclovir 800 mg 5 times/day for 10 days, with prompt resolution of her rash.
References


