

Genital Herpes Zoster as Possible Indicator of HIV Infection

Herpes zoster (HZ) is an acute, cutaneous viral infection caused by the reactivation of varicella-zoster virus (VZV) (1). It is a frequent medical condition with an incidence rate of 2-3 cases per 1000 person/years in the general population and 7-10 cases per 1000 person/years after the age of 50 (1,2). Risk factors and triggers for reactivation of HZV have not yet been determined precisely, but are likely to include malignancies, immune deficiencies, solid organ and bone marrow transplant recipients, autoimmune diseases, psychological conditions, emotional stress, human immunodeficiency virus (HIV) infection, and other patients receiving immunosuppressive therapies (1,3).

A 24-year-old IV drug user presented with grouped clusters of vesicles and erosions on an erythematous, edematous base distributed on the left side of the penile shaft and the left infraumbilical region (Figure 1, a and b), with regional lymphadenopathy. He had prodromal symptoms of pain, dysesthesia and burning a few days prior to the appearance of the skin lesion. The patient reported unprotected sexual contacts a few months before the eruptions. The unilateral distribution was highly suggestive of herpes zoster. A Tzanck smear was performed by obtaining scrapings from the base of a fresh vesicular lesion after it had been unroofed; it showed the characteristic presence of multinucleated giant cells that suggested herpes

infection. Polymerase chain reaction (PCR) analysis of vesicular fluid yielded positive results for VZV. A 7-day course of acyclovir (800 mg 5 times a day) was initiated. The patient reported marked improvement on the second day of antiviral therapy. The course was uncomplicated, and the lesions healed without postherpetic neuralgia. Serologic tests for syphilis (VDRL/RPR and TPHA) and hepatitis C and B serologic tests were negative, but HIV test (enzyme immunoassays (EIA) for HIV-1 and HIV-2 antibodies were positive, which was later confirmed with Western blot (WB) tests. Because of the positive HIV test, the patient was referred to the Clinic for Infectious Diseases for further treatment.

Herpes zoster is painful vesicular skin eruption with unilateral dermatomal involvement, usually with a severe impact on the quality of life in affected patients (1). The risk for developing HZ during a lifetime in patients exposed to VZV infection is 10-30% (4). However, the risk is higher in immunocompromised patients, particularly in cancer patients and HIV-positive patients (1,5,6). HZ is seen approximately 7 times more frequent in patients with HIV infection (5). Reactivated VZV infection may occur at any stage of HIV infection and may be the first clinical evidence of HIV infection. The development of HZ in immunocompromised individuals can be explain by



Figures 1a and 1b. Grouped clusters of vesicles, and erosions on an erythematous, edematous base distributed on the left side of the penile shaft (1a) and the left infraumbilical region (1b)

decline in cell-mediated immunity and CD4 count (6). HZ predominantly affects the thoracic region, followed by the head, cervical, and lumbar regions (1). Sacral dermatomes are involved in only up to 2% of cases (1). HZ involving the penis is rarely reported, with only few case reports in the literature (3,7-9). Birch *et al.* compared VZV and herpes simplex virus (HSV) in specimens obtained from the genital lesions of adults presenting with presumed genital herpes infection (10). They found VZV in nearly 3% of virus-positive genital specimens, which demonstrates that this virus needs to be considered in the differential diagnosis of genital herpetic lesions (10) and that it is possible that genital HZ infection is underdiagnosed. Tzanck smear is a rapid and inexpensive method, but it cannot differentiate VZV from HSV. Genital HZ could be mistaken for zosteriform HSV infection, so a PCR test should be performed to confirm the underlying diagnosis (1).

Genital forms of HZ are rare and sometimes clinically difficult to diagnose, especially when the typical zosteriform distribution is lacking; PCR testing is therefore suggested. HZ is considered a possible HIV indicator; an HIV test should therefore be performed.

According to our knowledge and literature search, this is the first case report of penile HZ in an HIV-positive patient.

Competing interests:

The authors state that there was no conflict of interest.

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