CASE REPORT

A not so simplex case of genital herpes

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SUMMARY

We report the case of a 28-year-old, HIV-positive woman presenting with painful vesicular and ulcerating lesions in the ano-genital region caused by varicella zoster virus that appeared similar to herpes simplex infection. The case highlights that herpes zoster needs to be considered in the differential diagnosis of genital lesions, particularly in HIV-positive individuals, and the importance of virological diagnosis by PCR to direct appropriate management.

BACKGROUND

Ulcerating genital lesions are a common presentation in immunocompetent as well as immunosuppressed patients, the majority being caused by herpes simplex virus (HSV). Consequently, HSV is often diagnosed on clinical grounds without virological confirmation or where virological diagnosis is undertaken, it is to distinguish HSV-1 and HSV-2. Varicella zoster virus (VZV) is a much less common aetiological agent in this setting but the diagnosis has important implications for management requiring higher doses of acyclovir for treatment.

CASE PRESENTATION

A 28-year-old HIV-positive Nigerian woman presented with painful vaginal and buttock lesions. Her CD4 count was 339 cells/ μ L (22%, nadir 32 cells/ μ L) with an HIV viral load of 518 copies/mL despite treatment with ritonavir-boosted darunavir and raltegravir (no drug resistance mutations).

The lesions were painful, not pruritic and had been present for 1 day. She was not feverish, but described shivering the night before. There was no oral ulceration or other accompanying systemic features. She had no history of genital HSV infection, and had not been sexually active in the preceding 8 months.

The patient was on her fourth month of antimycobacterial therapy for a granulomatous lung disease (*Mycobacteria* not cultured), and had recently received foscarnet for cytomegalovirus viraemia and hepatitis.

On examination, a vesicular rash was seen on the right labium majorus, clitoral hood and right buttock, not extending to the natal cleft. There was no associated lymphadenopathy. Dermatomes S3, S4 and S5 were involved and the initial clinical diagnosis was HSV infection. In view of the multidermatomal pattern of lesions swabs were taken and tested for HSV and VZV by PCR. She was initially treated with oral valaciclovir 1 g twice daily. Four days later, she attended for review and now reported of pruritis and pain on micturition.

She had also had fevers which had resolved. On examination the vesicular lesions had ulcerated, with new vesicles evident in the natal cleft.

INVESTIGATIONS

Viral swabs were positive for VZV DNA and negative for HSV by PCR. Retrospective serological testing (sample from 1 month prior to onset of symptoms) revealed VZV IgG positive, HSV-1 IgG positive and HSV-2 IgG negative. These laboratory investigations were pivotal in gaining the correct diagnosis, hence should be considered standard practice in such cases. Of note, HSV exposure is so prevalent in the general population that positive HSV serology adds relatively little in diagnosis.

DIFFERENTIAL DIAGNOSIS

The primary differential diagnosis included:

- ▶ HSV (type 1 and 2)
- ▶ Genital tuberculosis
- ▶ Behçet's disease
- ▶ Syphilis
- ▶ Drug eruption
- ▶ VZV

TREATMENT

In light of the diagnosis of disseminated, multidermatomal VZV, she was offered treatment with intravenous acyclovir (10 mg/kg four times a day) for 14 days, which would be switched to oral once improving. She declined admission and was thus discharged with an increased oral dose of valaciclovir (1 g three times a day) and topical cidofovir cream to be used twice daily. Though topical cidofovir is not the standard of treatment, this was added as she would not be admitted for the first-line treatment. It should be noted that acyclovir is a safe and effective medication, with potential side effects including general gastrointestinal upset and renal impairment. There remains ongoing debate whether gabapentin might reduce incidence of post-therapeutic neuralgia,¹ the decision made not to use it in this case.

OUTCOME AND FOLLOW-UP

This treatment was discontinued after 2 weeks, the genital lesions resolved completely by 4 weeks.

DISCUSSION

HSV is the most common ulcerative sexually transmitted infections in the UK.² Therefore, in a sexually active patient presenting with vesicular or ulcerating lesions in the genital region, the primary differential diagnosis is HSV infection. The most common causative agent is HSV-2, though HSV-1 is Page 2 of 4 Page 3 of 4 increasingly implicated in

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many European countries, North America and Canada.³ In light of this, virological confirmation of the diagnosis should be made.³

Herpes zoster (HZ) results from reactivation of latent VZV infection. Immunosuppressed patients, with conditions such as HIV infection, malignancy and those taking immunosuppressive medication, are at increased risk of zoster. The differential diagnosis of VZV in genital lesions is often overlooked, particularly if the lesions are not classically dermatomally in distribution.

Owing to this patient's HIV status, reactivation of VZV is an important differential. However, VZV may also be a more frequent cause of ulcerative genital lesions in immunocompetent patients than commonly thought. Birch *et al*⁴ performed PCR testing on viral swabs taken from 6210 patients attending general practices, infectious disease and sexual health clinics with a presumed diagnosis of HSV infection and found that VZV was detected in 2.9% of the samples.

HZ of the genital area is reported very rarely. We identified only three recent case reports of genital HZ—one following administration of cancer chemotherapy⁵ in a male patient, and two cases of vulval HZ in which no obvious precipitating factors were identified.⁶ One of these patients received extensive, invasive investigations as the differential HZ had not been considered and also went on to experience disabling postherpetic neuralgia which may have been reduced or avoided through earlier diagnosis and appropriate management. A number of cases of ano-genital VZV infection have been identified in children, in which the laboratory confirmation of diagnosis was required in relation to concerns of child sexual abuse.^{7 8}

HSV is a common condition in sexual health clinics, often diagnosed and treated on clinical grounds. Laboratory confirmation, when performed, is aimed at typing HSV-1 and HSV-2 and VZV is not routinely tested for. This may result in a significant number of people with genital HZ not being identified. Correct diagnosis of genital HZ is important to direct appropriate antiviral management, particularly in immunosuppressed patients.

Furthermore, there are significant differences between VZV and HSV with respect to the likelihood of recurrence, future treatment options and patient education regarding avoidance of onward transmission.

Learning points

- ▶ Genital zoster is an important differential in patients with genital ulcers.
- ▶ It is fair to assume painful genital conditions in sexually active population to be secondary to HSV until proven otherwise and treated as such at the time of presentation.
- ▶ Laboratory confirmation of diagnosis is important in all patients.
- ▶ Accurate diagnosis of the cause of genital ulceration facilitates appropriate management and optimisation of outcomes.

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Competing interests None.

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