

MANAGEMENT OF RECURRENT HERPES LABIALIS IN IMMUNOSUPPRESSED PATIENT – A CASE REPORT

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Abstract

The clinical manifestations of herpes simplex virus (HSV-1 and -2) are found in both immunocompetent patients and in those immunocompromised. However, the typical lesions observed among immunosuppressed patients usually become more severe, long-lasting and require different interventions in individuals whose immune systems can not limit the infection. Secondary or recurrent HSV-1 infection occurs through the reactivation of the virus, although many patients may present only asymptomatic infection in saliva.

The hallmark of the recurrent herpes labialis is characterized by burning sensation, itching, tingling or localized heat followed by the appearance of a rash before the onset of the bullous and vesicular lesions. The majority of cases are treated by antiretroviral drugs. For this reason, clinicians need to be aware of atypical cases which suggest a clinical immunosuppression that have not yet diagnosed.

The aim of this article is to report a case of recurrent herpes labialis of an immunosuppressed patient.

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Introduction

Among the various infectious diseases that may occur in the mouth, the most frequently observed for involves the HSV-1. The contact with this virus typically occurs before puberty. When a patient is infected, the virus remains in its latent form within the regional neural ganglia indefinitely. Despite the initial infection is present in young patients, many individuals have signs and symptoms. Some individuals exhibit clinical symptoms such as malaise and possibly fever, while others develop primary herpetic gingivostomatitis¹. Nonetheless, patients often

report pain, swelling, and cosmetic concerns associated with recurrent episodes and fear of transmitting herpes simplex virus (HSV) to others².

Recurrent lesions appear throughout the life of an infected individual, usually at epithelial sites such as the eye (herpetic keratitis), skin, oral cavity (herpetic stomatitis), lips (herpes labialis), and orofacial complex (herpes facialis). In an immunocompetent person, recurrences are generally limited and constrained to peripheral tissues innervated by the latently infected neurons³.

Recurrent herpes labialis is an infection of the lip by herpes simplex virus (HSV-1). Although most patients with recurrent herpes labialis have fewer than two episodes yearly, a small percentage of patients (5% to 10%) for reports frequent recurrences, defined as six or more episodes yearly². Common triggers that can reactivate the virus include fatigue, fever, ultraviolet radiation, chapping, abrasion, menses, skin trauma, and immunosuppression⁴⁻⁵. The small clusters of vesicles or ulcers involving a

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limited portion of the initially infected dermatome generally appear within two days of entry into the epithelium³.

Recurrent herpes labialis is characterized by small blisters (vesicles) filled with clear yellowish fluid. These injuries are manifested in a sudden, after numbness or itching of the lips during the 4-6 days. The vesicles break down leading to ulcers covered by crusts. The healing of injuries occurs between seven and ten days and leaves no scars¹.

The diagnosis of HSV-1 or HSV-2 infection usually is based on the patient's medical history, for symptomatology and clinical findings. However, laboratory confirmation may be required when the clinical features are atypical or when patients are immunocompromised⁶. The aim of this article is to describe a case of recurrent herpes labialis in a patient with HIV disease.

Case Report

A 36-year-old white male was referred to the Hospital Oswaldo Cruz in Curitiba (Brail) with symptoms of intense weight loss and with complaints of diarrhea, cough, sweats (particularly at night), painful vesicles and hemorrhagic crusts on the lips. The patient had decreased 14 Kg in last four months.

The patient's medical history revealed a recent diagnosis of HIV infection and the use of illicit drugs. Initial laboratory investigation revealed normal liver and kidney function tests and blood sugar levels; complete hemogram showed anemia and leucopenia; and erythrocyte sedimentation rate: 110 mm. The CD4 count was 84 cells/ μ L and viral load was 287.256 cells.

Intraoral physical examination revealed oral candidiasis (thrush), gingivitis, dental caries, and some residual tooth roots. Furthermore, several yellow vesicles and ulcers covered by a slightly brownish crust in the upper and lower lip (Figure 1). Vesicles were also located in the skin around the lips.

According to the patient, these lesions appeared five days ago following high fever. The lesions were painful and causing discomfort due to aesthetic reasons. These lesions limited his oral hygiene and intake of food, but intravenous rehydration was not necessary. No regional lymph node involvement was found.



Figure 1. Vesicles and hemorrhagic crusts on the vermilion and around the lips.



Figure 2. Clinical appearance of patient after 7 days of treatment with Acyclovir.

A complete medical evaluation for tuberculosis was done and the suspicion of pulmonary tuberculosis was ruled out. Serology tests confirmed that the patient was positive for HSV (IgG and IgM positive). The clinical features of the lesion reinforced one diagnostic hypothesis: recurrent herpes labialis.

The patient was treated with a 12-day course of acyclovir (600 mg/day) associated with topical acyclovir (ointment 5%). With this combined course of treatment, the disease was controlled. After 12 days of treatment, skin and lip lesions were controlled (Figure 2). Oral candidiasis was treated by fluconazol associated to topical nystatin. The lesions disappeared and the patient discharged from the hospital. In addition, the patient was treated by highly active antiretroviral therapy because of low CD4 count. The patient was referred for outpatient and has shown no recurrence of HSV.

Discussion

The World Health Organization (WHO) identified HIV/AIDS as the world's most urgent public health challenge, because AIDS represents the greatest lethal epidemic in recent history. HIV infection is commonly associated with activation and dissemination of several other viral pathogens, including herpes simplex virus 1 and 2, human cytomegalovirus, human herpesvirus 8, Epstein-Barr virus, Varicella Zoster virus, and human papillomavirus, which behave as opportunistic agents and cause various diseases in immunocompromised hosts^{1,7}.

The increased frequency and severity of diseases caused by these viruses in HIV-infected individuals is due mainly to dysfunction of both the adaptive and innate immune responses to viral pathogens⁸. Infections with herpes simplex virus type 1 and 2 (HSV-1 and HSV-2) are important, common, and worldwide in distribution⁹.

Ninety-eight percent of herpes simplex virus lesions are caused by reactivated disease and tend to be characterized by large, very painful ulcerative lesions throughout the mouth¹⁰. In this case report, a bilateral recurrent herpes labialis was diagnosed around the lips of the patient. Several triggers may reactivate the virus, such as: fatigue, fever, ultraviolet radiation, chapping, abrasion, menses, skin trauma, and immunosuppression^{4,5}. In this case, the low CD4

count should have been responsible for the reactivation of HSV, because the patient had a CD4 count = 84 cells/ μ L.

Although the diagnosis of HSV infections is usually made clinically, Tzanck test, electron microscopy, viral culture and polymerase chain reaction (PCR) detection of HSV DNA can be utilized to verify the diagnosis¹¹⁻¹². Herpes simplex viruses type 1 (HSV-1) and 2 (HSV-2) cause a variety of medically significant infections, especially in immunosuppressed subjects. HSV also plays an important role in the disease progression of HIV infection. Chronic infection of HSV-1 has been regarded by the WHO as an important factor affecting the disease progression of HIV/AIDS. HSV-1 infection is usually transmitted during childhood and adolescence and is most often transmitted via nonsexual contact¹.

Although this infectious disease has a predictable clinical course that progresses to an auto-regression, in this case, several lesions were widespread and severe in a region of the face which caused discomfort to the patient. In addition, laboratory tests revealed that the viral load was high and low CD4 count. HIV destroys CD4 lymphocytes gradually and the count relates inversely with the severity of the disease. According to Duggal et al.¹³ the chances of oral lesions appear increase in patients a significantly higher viral load and lower CD4 count. However, any lesion in immunocompromised individuals must be immediately treated. Thus, a regimen that included topical and systemic drugs was established for the treatment of recurrent herpes labialis and oral candidiasis.

Acyclovir, valacyclovir hydrochloride, and famciclovir are the 3 antiviral drugs routinely used to treat symptomatic herpes simplex virus (HSV) infections¹⁴. CDC - Centers for Disease Control and Prevention has recommended the following treatment regimens for episodes of HSV-1 and HSV-2 infections: i) Acyclovir 400 mg orally three times a day for 7–10 days; or ii) Acyclovir 200 mg orally five times a day for 7–10 days or; iii) Famciclovir 250 mg orally three times a day for 7–10 days; or iv) Valacyclovir 1 g orally twice a day for 7–10 days. Treatment might be extended if healing is incomplete after 10 days of therapy. Intravenous (IV) acyclovir therapy should be provided for patients who have severe HSV disease or complications that necessitate hospitalization (e.g., disseminated infection,

pneumonitis, or hepatitis) or CNS complications (e.g., meningoencephalitis). The recommended regimen is acyclovir 5–10 mg/kg IV every 8 hours for 2–7 days or until clinical improvement is observed, followed by oral antiviral therapy to complete at least 10 days of total therapy. Acyclovir dose adjustment is recommended for impaired renal function¹⁵. In our case, the patient was treated with a combination of topical and systemic acyclovir. Acyclovir therapy has proved safe for the long-term suppression of recurrent genital herpes infections and recurrent herpes labialis^{2,16,17}.

Conclusion

Recurrent herpes labialis is a lesion with unique clinical features but it can become exacerbated principally in immunocompromised patients. Thus, clinicians need to be aware of these situations lead to the diagnosis and treatment more appropriate.

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Declaration of Interest

All authors disclose that there was no conflict of interest that could inappropriately influence in this report of case.

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