Oral Health Case Reports
ISSN: 2471-8726
Khasbage, Oral health case Rep 2017, 3:1
DOI: 10.4172/2471-8726.1000131
Case Report Open Access

Recurrent Herpes Labialis during Pregnancy: A Case Report

Dangore Khasbage S*

Department of Oral Medicine and Radiology, Sharad Pawar Dental College and Hospital, Sawangi (M), Wardha, Maharashtra, India

Abstract

Herpes simplex labialis is one of the common infectious diseases caused by Herpes Simplex Virus (HSV) type 1 and is commonly contracted during childhood or adolescence. These infections are manifested as primary and recurrent episodes and affects the vermillion border of the lip in about 90% of cases, the palate in 5% of cases, and elsewhere above the chin or on the oral mucosa rarely. In primary and recrudescent HSV-associated disease, the symptoms may range from subclinical to debilitating and life-threatening, depending on the host's immune responses or competence level. Several factors, including exposure to intense sunlight, psychological stress or immunosuppression may trigger a recurrence. A case of recurrent herpes labialis with acute herpetic gingivostomatitis during pregnancy and the role of oral physician in managing such cases are described in the present article.

Keywords: RHL; AHG; Recurrence; Antiviral drugs; Pregnancy

Introduction

Acute herpetic gingivostomatitis (AHG) and recurrent herpes labialis (RHL) are the common oral mucosal diseases caused by herpes simplex virus type 1 (HSV-1). However, infection with herpes simplex virus type 2 (HSV-2) can also lead to primary herpes labialis, although this type rarely causes a recurrence of the disease [1]. Recurrences of herpes labialis may be triggered by systemic factors, including stress, menses, fever and local stimuli like injury, sunlight exposure as well as dental procedures [2].

The HSV-1 infection is usually asymptomatic, while clear clinical manifestations are present only in 10% of patients [3]. The treatment is primarily palliative and supportive directed toward controlling the signs and symptoms. Systemic antiviral chemotherapy is given to the patients with exacerbated manifestations and immune compromised status [3].

The present article describes a case of RHL with AHG in a 32 years old pregnant female treated by topical antiviral drug. The compromised immunity during pregnancy might be a triggering factor for recurrence of the condition. Although epidemiologic data and the potentially serious effects of transmission of genital herpes from mother to infant during birth have been widely reported, published reports on oral herpes disease in pregnancy remain scarce.

Case Report

A 32-year-old female reported to department of Oral Medicine and Radiology with chief complaint of blisters and ulcers on lower lip since 2 days. She gave history of fever 3 days back, which was followed by appearance of blisters on inner and outer side of lower lip. Most of the intraoral blisters ruptured in 2 days. There was history of similar lesions 2 times in the past, approximately before a month and 3 months back which were healed within a week without taking any medication. There was no history of similar lesions elsewhere on the body especially genital, eye or on skin. Her medical history revealed that she was pregnant and was in 3rd trimester of pregnancy. This was her first conception. Her family history was non-contributory. On general physical examination all, the vital signs were within normal limits. Lymph node examination revealed bilateral submandibular lymphadenopathy. The lymph nodes were less than a centimeter in size, mobile, tender and firm in consistency.

Figure 1: Multiple vesicles just below the vermillion border on the right side and ulcer at the corner of mouth.

On extra oral examination, there were multiple vesicles with scab formation, few millimeters in size present below vermillion border of lip and an ulcer at corner of mouth with erythematous base on the right side (Figures 1 and 2). Intra oral examination showed multiple small ulcers on lower labial mucosa surrounded by an erythematous area. Ulcers were mildly tender on palpation (Figure 3). There was no discharge during examination. The marginal and attached gingiva of the both the arches was swollen, bright red, very tender and bleeding on probing was present, features were suggestive of acute gingivitis (Figure 3). On the basis of history and clinical presentation a provisional diagnosis of RHL was made and she was treated by antiviral drug, local application of acyclovir cream to the affected area four times in a day for 5 days.

The lesion subsided after a week. On recall visit after 7 days, the lesions were completely resolved (Figure 4). Counseling of the patient was done regarding recurrence of the condition as well as the preventive measures that she should take to avoid genital HSV infection.

***Corresponding author:** S. Dangore Khasbage, Department of Oral Medicine and Radiology, Sharad Pawar Dental College and Hospital, Sawangi (M), Wardha, Maharashtra, India, Tel: + 9923024036; Fax: 07125-231412; E-mail: dangore_suwarna@rediffmail.com

Received: January 28, 2017; **Accepted:** February 22, 2017; **Published**: February 26, 2017

Citation: Khasbage SD (2017) Recurrent Herpes Labialis during Pregnancy: A Case Report. Oral health case Rep 3: 131. doi:10.4172/2471-8726.1000131

Figure 2: Multiple vesicles just below the vermillion border on the right side and ulcer at the corner of mouth.

Figure 3: Multiple ulcers surrounded by erythema on lower labial mucosa and swollen, bright red gingiva.

Figure 4: Clinical appearance after resolution of lesions after a week.

Discussion

HSV is a double-stranded DNA virus that forms the part of the alpha herpes viridae subfamily of viruses. HSV exists in two types, type 1 and 2, which are distinguished by antigenic differences in their envelope proteins. HSV infection results in lifelong infection, which can be asymptomatic or present with recurrent lesions. Generally, HSV-1 has been associated with oro-labial disease with most infections occurring during childhood. HSV-2 is almost entirely associated with genital disease. However, it is possible for HSV-2 to cause oro-labial herpes and HSV-1 to cause genital herpes [4,5].

Both primary and secondary genital HSV infections may develop during pregnancy, with potentially severe consequences to the fetus or neonate. If transmitted to the embryo or fetus, these infectious agents may cause early embryonic or fetal damage, with or without miscarriage, or major congenital or developmental anomalies [6]. Thus, in the preset case, it was necessary to counsel the patient and to make her aware about the recurrent herpes infections especially genital herpes. Fortunately, a recently published literature suggests that herpes labialis during pregnancy is not associated with a substantially increased risk of neural tube defects in infants [7].

In oral herpes infection, HSV-1 disseminates primarily through contact with saliva or active perioral lesions. The first exposure of an individual without antibodies against the virus is called primary infection. This infection typically occurs in young individuals. However, 80% of all adolescents have already present antibody [8]. After the first contact, the virus establishes a life-long latency in sensory nerve ganglia, more frequently the trigeminal ganglion [8]. A variety of factors like exposure to intense sunlight, fatigue, psychological stress, menses, skin trauma or immunosuppression can precipitate a recurrence by activation of the virus, which migrates to the epithelial cells through the affected nerve, causing recurrent herpes [1,9]. Similarly, the immunosuppression during pregnancy could be a possible reason for repeated oral herpes labialis in the present patient.

Maximum viral levels occur within the first 24 h after the onset of infection when most of the lesions are in the vesicular stage. When level of virus begins to decline, the lesions are converted to ulcerations covered by crusts. Complete healing without scarring usually occurs between 7 and 10 days [2]. RHL affects 16% to 38% of the population [10].

The diagnosis of RHL is usually made on the basis of clinical presentation and history. In the present case also the characteristic clinical presentation, lead to appropriate diagnosis. But, in doubtful cases, various recurrent and acute conditions causing oral ulcerations such as acute necrotizing ulcerative gingivitis, herpangina, aphthous stomatitis, varicella zoster infection, erythema multiform, allergic stomatitis should be considered in differential diagnosis. Varicella zoster infection can be ruled out on the basis of absence of classic unilateral presentation. The absence of characteristic skin lesions and sparing of lips helped to rule out erythema multiforme. Aphthous ulcers are usually present on non-keratinised mucosa while the herpes ulcers are on keratinized mucosa like gingiva, palate. In Herpangina, though the clinical presentation of ulcers is similar to herpes ulcers, herpangina always affects posterior part of oral cavity. However, in suspicious cases the diagnosis can be confirmed via laboratory tests: Serological assays (anti-HSV IgM and IgG), the Tzanck test and immunofluorescence, but the culture of viral isolates is still considered to be the gold standard [11].

Herpes simplex infection is self-limiting condition. However, antiviral chemotherapy offers a significant clinical benefit to the majority of symptomatic patients and is the mainstay of management. Acyclovir, valacyclovir hydrochloride, and famciclovir are the 3 antiviral drugs routinely used to treat symptomatic herpes simplex virus (HSV) infections [1,11].

Although there are several antiviral drugs, acyclovir therapy has been proved safe for the long-term suppression of recurrent genital herpes infections and RHL. The recommended regimen is acyclovir 5 mg/kg to 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 [11]. In the present case, complete remission takes place with topical application of antiviral drugs while the authors of previous studies have mentioned about the use of systemic acyclovir for treatment of oral herpes simplex infection in Pregnancy [6,9].

In cases of frequent recurrences or association with viral-induced erythema multiforme, long-term preventive systemic antiviral therapy may be required. Systemic administration of acyclovir accelerates the

resolution of viral shedding and healing time, and reduces pain. The location of the lesions and the chronicity (primary or reactivation) of the infection dictate the dosage and frequency of medication. It is important to note that life-threatening HSV infections in immune compromised patients and HSV encephalitis require high-dose intravenous acyclovir, often started empirically [1].

Oral physicians should be aware of the risk of acquisition and development of fulminant HSV-1 infection during pregnancy because of physiological immunosuppression. Here, the role of oral physician is to use the measures to avoid cross infection in his clinic and to alert his or her pregnant patient who is suffering from oral herpes infection about the precautions she should take to avoid complications.

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