

Oral Viral Infections

Diagnosis and Management



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KEYWORDS

- Herpes simplex • Varicella zoster • Mononucleosis • Cytomegalovirus
- Enteroviruses • Rubeola and rubella • Mumps and human papilloma virus
- Human herpes virus

KEY POINTS

- This article discusses common viral infections in the oral cavity that will be helpful to dental students, general dentists, and hygienists.
- This article includes common features seen clinically, as well as the histopathology, treatment, and prevention of viral diseases in the oral cavity.
- This helpful guide briefly discusses the main topics especially for the newly trained dentist and dental personnel.

INTRODUCTION

This article focuses on commonly seen viral infections in the oral cavity with associated systemic manifestations. The article discusses their clinical features, histopathology, diagnosis, treatment, and prevention. This will be a useful aid for general practitioners and other dental personnel wanting to expand their knowledge of oral pathology. This article encompasses the following viral infections: herpes simplex, varicella zoster, mononucleosis, cytomegalovirus (CMV), enteroviruses, rubeola, rubella, mumps, and human papillomavirus.

HUMAN HERPES VIRUSES

There are 8 types of human herpes viruses in the Herpesviridae family. The most well-known, herpes simplex virus (HSV), exists in 2 types: HSV-1 and HSV-2. The remaining types in the Herpesviridae family include varicella zoster virus (VZV), Epstein-Barr virus (EBV), CMV, HHV-6, HHV-7, and HHV-8.^{1,2}

The authors have nothing to disclose.

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HERPES SIMPLEX VIRUS

According to the World Health Organization, in 2012 an estimated 3.7 billion people under 50 years of age (67%) tested positive for HSV-1 infection and approximately 417 million people aged 15 to 49 (11%) tested positive for HSV-2 infection.³

Herpes Simplex Virus Type 1

HSV type 1 is an enveloped, linear, double-stranded DNA virus that is usually acquired during childhood. Its primary mode of transmission is via infected saliva or direct contact of mucocutaneous lesions. Clinically they can be characterized in 2 forms:

1. Primary, which typically occurs in younger age groups and is often asymptomatic; or
2. Secondary, which occurs as a reactivation of the infection after a dormant phase.

In primary infection, the virus migrates to the sensory or autonomic ganglia (trigeminal ganglia) where it remains dormant until reactivation (secondary or recurrent form). Reactivation occurs during stress induced states (ie, fever, anxiety, immune compromised states). Incubation period ranges from several days to 2 weeks.^{1,4,5}

Herpes Simplex Virus Type 2

HSV type 2 is structured the same as HSV-1, but has a predilection for genital mucosa lesions. Transmission occurs from oral to genital contact. Similar to HSV-1, HSV-2 becomes latent in the autonomic ganglia (lumbosacral region). However, HSV-2 is also capable of causing ocular lesions in newborns. Transmission occurs from infected mothers during the peripartum period owing to disrupted membranes and/or with direct contact with the infected mother's vaginal secretions.^{1,4}

Clinical features

Primary herpetic gingivostomatitis Primary herpetic gingivostomatitis is an acute onset of the primary form of HSV-1 that occurs between the ages of 6 months and 5 years. Primary herpetic gingivostomatitis commonly presents with flulike symptoms (fever, chills, and cervical lymphadenopathy), intraoral mucosal lesions (usually 2–3 mm in size) and skin lesions. Lesions usually take about 7 to 10 days to resolve and heal without scar formation.¹

Herpes labialis Herpes labialis is secondary or recrudescient herpes occurring around the perioral region, characterized by a burning and itching sensation before the appearance of vesicles. They can also appear in keratinized tissue of the hard palate and gingival tissues owing to the reactivation of the latent virus during conditions of stress or immunocompromised states¹ (Fig. 1).



Fig. 1. A 3- to 4-day-old herpetic lesion on the lower lip.

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