

Herpetic Ulcer: A Case Report and A Review Literature

G. DIVYA¹, G.S. ASOKAN², U. TAMILARASI³, V. ANAND⁴ and N BALAJI⁵

Department of Oral Medicine and Radiology, Tagore Dental College and Hospital,
Ratinamangalam, Vandalur post, Tamilnadu, India.

DOI: <http://dx.doi.org/10.13005/bpj/732>

(Received: August 15, 2015; accepted: September 20, 2015)

ABSTRACT

Herpes infection causes painful sores in lips, gingiva, tongue, palate & buccal mucosa, which is characterized by sudden onset and severity of symptoms. It also causes symptoms like fever and muscle ache. The causative agent for herpetic infection has been identified as herpes simplex virus which is a DNA virus, in two forms HSV-1 & HSV-2. Most oral, facial and ocular infection results from HSV-1. In this paper we presented a case of Herpes infection in 23-year-old male patient.

Key words: Herpes gingivostomatitis, herpes zoster, ulcers, cold sores, herpes simplex.

INTRODUCTION

Herpetic infections typically affect children, but this infection also occurs in adults, because of the limited symptoms a dentist may be the first health care practitioner consulted. HSV is a double standard DNA virus and is a member of Human Herpes Virus (HHV) Family officially known as Herpesviridae¹ virus exists in 2 forms, HSV-1 affects mostly in oral, facial and ocular infections and HSV-2 accounts for most genital and cutaneous lower body herpetic lesion.

Oral herpes is an infection which is caused by herpes simplex virus. The virus causes painful sores on lips, gingiva, palate, and the buccal mucosa, this usually occurs in older children and consists of fever, malaise, headache, cervical lymphadenopathy and a vesiculo-ulcerative eruption on the peri-oral skin, vermilion border of lip or any intra-oral mucosal surface. HSV-1 is usually acquired during childhood but the prevalence of infection is seen in both the age groups.

Pain, burning, tingling, or itching occurs at the infection site before the sores appear. Then clusters of blisters erupt. These blisters break down rapidly and, when seen, appear as tiny, shallow, grey ulcers on a red base. The diagnosis is based on information provided on clinical examination. Treatment is use of antiviral medications either topical or systemic.

Case report

A 23-year-old male patient came to the department of oral medicine and radiology in Tagore dental college with a chief complaint of pain and burning sensation in the upper part of the mouth for the past 3 days. History reveals that he developed small vesicles in the upper part of the mouth after that it ruptured before 3 days. He had burning sensation while having spicy foods for the past 3 days.

On clinical examination right submandibular lymph node was palpable which is 1x1cm in size, mobile and tender on palpation. Intraoral examination reveals multiple small

ulcers in size of 1x1 mm seen in the area adjacent to the right midpalatine raphe (Figure 1). Ulcers have well defined margin and surrounded by erythematous border. A single large ulcer seen in palatal mucosa of 16, 17 (Figure 2). Ulcer is 3x2 cm in size and margins of the ulcer is well defined. It has erythematous border and yellow pseudomembranous slough in the base. Ulcer was soft in consistency and severe tender on



Fig 1: Shows multiple small ulcers in the area adjacent to the right midpalatine raphe

palpation. Other clinical findings such as calculus, stains and multiple dental caries were present.

Based on the history and clinical examination the patient was diagnosed as herpetic ulcer. Patient was advised for medications such as diclofenac mouth rinse, acyclovir ointment and multivitamins supplement. Patient advised to drink plenty of water and soft diet. Then we recalled patient after 1 week and follow up was being made.



Fig 2: Shows single large ulcer seen in palatal mucosa of 16, 17

DISCUSSION

Two of the known Herpesviridae, HSV-1 and HSV-2 are responsible for primary and recurrent mucocutaneous herpetic infections. Even though herpetic gingivostomatitis is primarily an HSV-1 infection isolated cases of HSV-2 association have been reported in older patients, probably transmitted sexually and causing genital infection.

Herpetic infection, both acute and recurrent, is a self-limiting disease with a healing period of 1 to 2 weeks. The most common mode of transmission of HSV is the saliva⁴ of the carriers. Infection on the hands of health care personnel from patients shedding HSV may result in herpetic whitlow.

Primary infection occurs in childhood from infected saliva or herpetic lesions⁵. Reactivation can occur at any time and may be triggered by ultraviolet

light, stress, fever, cold, pregnancy or menstruation, gastrointestinal upset or local trauma. Recurrences are generally less severe than the primary infection and severity and frequency tend to diminish with time.

It is important to distinguish primary from recurrent herpetic infection. In general terms, a primary infection is more severe, with associated lymphadenopathy, fever and malaise. Recurrent infections occur at various intervals (ranging from monthly in some individuals to seldom in others) and affect the non-movable intraoral tissues (the hard palate and attached gingiva) in contrast to primary herpes which can occur anywhere in the mouth.

Once HSV penetrates the host's epithelial cells, viral replication occurs. The newly formed HSV come into contact with sensory nerve endings and are transported to the corresponding ganglion². In oral herpes, the most common site is

the trigeminal ganglion. Here the viral DNA enters the ganglion, where it becomes inactive or latent. The incubation period is the period during which viral replication and transport to the sensory ganglion occur. For HSV this period is variable and can range from 2 to 12 days, but in most cases it is approximately 1 week. The severity of the primary infection depends on the degree of viral replication, the host's response to the foreign pathogen and the speed with which latency is established.

Pain, burning, tingling, or itching occurs at the infection site before the sores appear. Then clusters of blisters erupt. These blisters break down rapidly and, when seen, appear as tiny, shallow, grey ulcers on a red base. A few days later, they become crusted or scabbed and appear drier and more yellow⁸. The most intense pain caused by these sores occurs at the onset and makes eating and drinking difficult.

The diagnosis of herpetic ulcer is usually made by clinical presentation and history. In the present case the typical cluster like appearance of ulcers on the palate surrounded by erythema and extreme tenderness which is seen adjacent to midpalatine raphae and a single large ulcer was seen on the palatal mucosa of 16 and 17.

The diagnosis can be confirmed via laboratory tests: ⁶Serological assays (anti-HSV IgM

and IgG), the Tzanck test and immunofluorescence, but the culture of viral isolates is still considered to be the gold standard⁷. HSV antibody testing can detect both viral types - HSV-1 and HSV-2.

Treatment of the acute herpetic infection includes symptomatic measures; if the disease is diagnosed early, systemic antiviral therapy is advised in order to accelerate clinical resolution. Recurrent herpetic lesions⁹ are frequently managed with topical application of antiviral agents. Palliative and supportive management of oral herpetic infections variably consists of controlling fever and pain, preventing dehydration, and shortening the duration of lesions. Topical anaesthetics, analgesics, and antipyretics, rinsing with lidocaine viscous (2%), before each meal, effectively reduce pain during eating.

CONCLUSION

Oral herpetic infections are not limited to children but can occur at any age. The recognition of the classic presentation of signs and symptoms is important, particularly in middle-aged and elderly people in whom they can complicate with the pre-existing medical condition. Prevention is better than cure. Lifestyle adaptation and modification and stress management techniques may help to prevent the severity of the infection.

REFERENCES

1. Neville, BW, Damm DD, Allen CM, Bouquet JE. Viral infections. In: Neville, BW, Damm DD, Allen CM, Bouquet JE. Oral and Maxillofacial Pathology. 2nd ed. Philadelphia: WB Saunders Co.; 213-20 (2002).
2. Whallett EJ, Pahor AL. Herpes and the head and neck: the difficulties in diagnosis. *J Laryngol Otol* **113**(6): 573-7 (1999).
3. Amir H. Acute Herpetic Gingivostomatitis in Adults: A Review of 13 Cases, Including Diagnosis and Management *Journal de l'Association dentaire canadienne* **68**(4):247-251 (2002).
4. MA Huber. Herpes simplex type-1 virus infection. *Quintessence Int.* **34**(6): 453-467 (2003).
5. RJ Whitley, B Roizman. Herpes simplex virus infections. *Lancet.* **357**(9267):1513-1518 (2001).
6. MA Siegel. Diagnosis and management of recurrent herpes simplex infections. *J Am Dent Assoc.* **133**(9):1245-1249 (2002).
7. CM Lee, DD Damm, BW Neville, C Allen, Bouquet J Oral and Maxillofacial Pathology, 3rd ed. St Louis: Elsevier-Saunders. 2009.
8. MS Greenberg. Ulcerative vesicular and bullous lesions. In: Greenberg MS, Glick M, (Editors). *Burket's Oral Medicine, Diagnosis*

- and Treatment, 10th ed.: BC Decker Inc.; USA. 68–71 (2003).
9. J Amir, L Harel, Z Smetana, I Varsano. The natural history of primary herpes simplex type 1 gingivostomatitis in children. *Pediatr Dermatol.* **16**(4):259–263 (1999).