

Beyond A Common Infection: Comprehensive Oral Management Strategies For Severe Recurrent Intraoral Herpes

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ABSTRACT

Background: Recurrent intraoral herpes (RIH) is caused by reactivation of Herpes Simplex Virus type 1 (HSV-1). While HSV-1 infection is usually self-limiting, severe cases requiring hospitalisation are uncommon and present significant clinical challenges. Delayed diagnosis or inadequate antiviral therapy can contribute to disease progression and increased morbidity. This case study aims to illustrate an effective therapeutic approach for managing severe RIH in a patient presenting with intense pain and difficulty swallowing, emphasising strategies that enhance patient comfort and improve clinical outcomes.

Case: A 24-year-old male presented in a markedly weakened condition with severe difficulty swallowing. Examination revealed multiple ulcerative lesions of varying sizes diffusely throughout the oral cavity, with extensive erythema and severe pain (Visual Analogue Scale [VAS] score: 8). Vital signs at presentation were blood pressure 90/60 mmHg and oxygen saturation 91%. Due to his weakened state and significant pain, inpatient care was required for close monitoring and nutritional support. Treatment included systemic acyclovir 400 mg, multivitamins, 0.025% hyaluronic acid mouthwash, 0.9% saline, and petroleum jelly 100%. After seven days of therapy, the patient clinically improved. Lesions gradually decreased in size and number, erythema subsided, and pain significantly reduced, allowing resumption of oral intake. VAS score decreased from 8 at admission to 5 at discharge.

Conclusion: Severe RIH can necessitate hospitalisation and multidisciplinary management. Early initiation of systemic antiviral therapy combined with supportive care effectively reduces symptoms, improves nutritional intake, and prevents further deterioration. Timely, comprehensive intervention is critical for optimal outcomes in severe HSV-1 reactivation.

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INTRODUCTION

Herpes Simplex Virus type 1 (HSV-1) reactivation is known as recurrent intraoral herpes (RIH) and is characterised by the appearance of painful, itchy vesicles on the oral mucosa. Prodromal symptoms include pain, paresthesia (tingling), and itching, which usually signal the onset of clinical development. Within 48 hours, the lesions, which initially appear as macules, quickly change into papules and vesicles. Between 72 and 96 hours later, these vesicles burst, forming crusts and ulcers that gradually go away without leaving scars.¹ 70% of people worldwide have been found to have oral HSV shedding. At least 90% of people worldwide have HSV infections, according to the WHO.²

Latency is a basic feature of herpesviruses. The inability of a virus to replicate and become a pathogen is known as latency. It can occasionally become active when specific triggering elements (internal and external stimuli) are present.³ Although RIH is typically self-limiting, in a previous case study, a patient with severe RIH was hospitalised and received analgesic, antibiotic, and topical triamcinolone therapy; nevertheless, no clinical improvement was observed after three days of hospitalisation.⁴ Therefore, in the present case, antiviral therapy was added to improve therapeutic outcomes.

The main complications requiring intensive management are often linked to severe dehydration and malnutrition caused by extreme odynophagia, which significantly impairs the patient's oral intake.⁴ Fever, menstruation, mechanical stress, and exposure to ultraviolet light, especially UV-B, are other triggers that affect HSV-1 reactivation. For instance, exposure to ultraviolet light can weaken local immune systems and harm epithelial tissues, increasing the risk of recurrent infection in the perioral region.⁵

Therefore, this case report aims to present the comprehensive clinical management of a severe RIH case necessitating hospitalisation. The discussion focuses on the effectiveness of combined systemic antiviral therapy and supportive care in accelerating lesion resolution and restoring the patient's oral intake.

CASE REPORT

A 24-year-old male farmer presented to the Oral Medicine clinic in a significantly debilitated state, reporting severe dysphagia that hindered oral intake. The patient described a three-day history of progressive difficulty eating accompanied by high-grade fever, which preceded the eruption of painful oral ulcers. Notably, the patient acknowledged a prior history of similar lesions. Occupational history revealed prolonged daily sun exposure (approximately four hours/day) in rice fields, suggesting ultraviolet radiation and physical exhaustion as potential precipitating factors.

Intraoral examination revealed diffuse, multiple ulcerative lesions of varying dimensions affecting the labial and buccal mucosa, tongue, and soft palate, as shown in Figure 1. These lesions presented with extensive surrounding erythema and were associated with intense pain (VAS score: 8). General examination indicated dehydration and physical weakness. Vital signs demonstrated hemodynamic instability, with hypotension (90/60 mmHg) and oxygen desaturation (91%). Given the patient's compromised systemic condition, severe oral pain, and nutritional risk, hospital admission was initiated for multidisciplinary management—including hydration, pain control, and monitoring—in collaboration with an internal medicine specialist. The prescribed oral therapy included systemic acyclovir 400 mg, administered five times daily, and multivitamins to enhance the immune response. Local therapy consisted of 0.025% hyaluronic acid

mouthwash (10 ml), rinsed three times daily. Additionally, 0.9% saline compresses were applied to the lips and intraoral cavity using cotton saturated with the solution. Following the saline compresses, 100% petroleum jelly was applied to the upper and lower lips to maintain moisture.



Figure 1. At the initial visit, the patient showed widespread oral ulcerative lesions. (A) Upper and lower lips. (B) Right lateral border of the tongue. (C) Lower labial mucosa. (D) Upper labial mucosa. Image acquisition was limited by the patient's severe pain.

After 7 days of treatment, the patient showed clinical improvement, with reduced lesion size and the ability to resume oral intake. Consequently, the patient was discharged, and the treatment was continued with a scheduled follow-up visit at the outpatient clinic seven days later. VAS score was 5



Figure 2. The patient shows significant improvement after seven days of inpatient care and can tolerate oral intake. (A) Upper and lower lips. (B) Dorsum of the tongue

showing removable white plaques without underlying erythema after scraping. (C) Lateral border of the tongue.

At the seven-day outpatient follow-up, the lesions appeared to have healed, and the patient's general condition had markedly improved. VAS Score was 2.

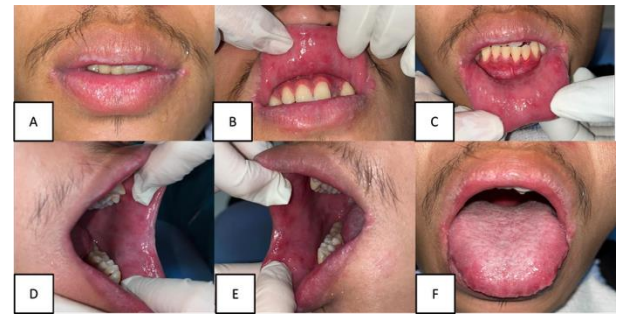


Figure 3. At the seven-day follow-up, oral lesions had significantly resolved, and the patient's overall condition had improved. (A) Upper and lower lips are showing significant healing. (B) Upper labial mucosa with mild residual erythema, without pain. (C) Lower labial mucosa with a small residual ulcerative area, without pain. (D) Left buccal mucosa healed. (E) Right buccal mucosa healed. (F) Lateral border and dorsum of the tongue healed.

DISCUSSION

The human herpesvirus family includes herpes simplex virus types 1 and 2 (HSV-1 and HSV-2). After primary oral HSV-1 infection, the virus migrates retrogradely to the trigeminal ganglion and remains dormant. Reactivation triggers anterograde viral spread to the oral epithelium, leading to viral replication and recurrent herpetic lesions, most commonly herpes labialis and recurrent intraoral herpes (RIH).¹

Although RIH is more common on the oral mucosa, both viruses cause similar ulcerations. In healthy individuals, intraoral recurrence usually presents as mild palate ulceration.⁶

Emotional stress, high fever, exposure to sunlight, brain damage, hormonal disorders, and immunosuppressive diseases can all cause HSV-1 to reactivate due to central or peripheral stimuli that

impact the sensory nucleus.⁷ In the present case, the patient experienced fever prior to lesion onset and reported prolonged daily exposure to sunlight due to agricultural work. Ultraviolet radiation, particularly UV-B, has been shown to induce local immunosuppression and epithelial damage, facilitating HSV-1 reactivation and viral replication at peripheral sites.

In immunocompetent people, HSV-1 reactivation typically manifests as small orolabial lesions. However, serious systemic stress and immunologic impairment have been linked to severe diffuse intraoral ulcerations like the one observed in this patient. These lesions frequently cause excruciating pain, which impairs oral intake and causes dysphagia.³ The patient's acute pain (VAS score 8) and lesion distribution, which included the tongue, labial and buccal mucosa, and lips, overpowered the body's defences. These results indicate that exposure to sunlight, especially UV-B radiation, can induce viral reactivation. UV light mediates local immunosuppression and stress signalling that can precipitate HSV-1 reactivation in neurons.⁸

Antiviral therapy significantly reduces transmission by reducing RIH subclinical shedding. Once ingested, this virus cannot be eliminated from the body; however, effective treatment, such as viral nucleoside analogues like acyclovir, can reduce the viral burden. Antiviral therapy also aims to reduce the severity and duration of lesions and the likelihood of subsequent complications. Five times a day, acyclovir was given as a causative therapy.³ Treatment for RIH oral lesions varies by clinical context and severity. Outpatients most commonly receive multivitamins with corticosteroids, while inpatients often get multivitamins plus acyclovir. Hospitalised patients usually need antivirals to reduce viral replication, reflecting differences in illness severity. Multivitamins are used to support

immune function, especially during systemic stress or nutritional.⁹

The non-steroidal group's 0.025% hyaluronic acid has anti-inflammatory properties and promotes healing. Additionally, hyaluronic acid is involved in cell signalling, morphogenesis, matrix organisation, gene expression regulation, and cell proliferation, among other biological activities. Petroleum Jelly 100% keeps the patient's lips moist by acting as a covering agent that preserves the outer skin, shields it from the sun and weather, and stops natural water loss. This is why it is applied to both the upper and lower lips.^{10,11}

The patient's treatment resulted in significant improvement, with no recurrence after 3 months. This case report describes a single patient with severe RIH; the findings should therefore be interpreted cautiously. The clinical response may not reflect outcomes in patients with different disease severity, immune status, or backgrounds. Therefore, the results cannot be generalised to a broader population.

CONCLUSION

Severe recurrent intraoral herpes (RIH) may require hospitalisation and multidisciplinary care. Early initiation of systemic antiviral therapy combined with appropriate supportive management is essential to reduce symptom severity, restore nutritional intake, and prevent further clinical deterioration, thereby ensuring optimal outcomes in severe HSV-1 reactivation.

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