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Should Elective Surgery Be Delayed in Patients with Active Herpes Labialis?

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ABSTRACT

Infection with Herpes Simplex Virus type 1 (HSV-1), commonly presenting as herpes labialis, is frequently encountered in perioperative anesthesia practice. Although generally considered a benign and self-limited condition, the presence of active vesicular lesions during the perioperative period raises several theoretical and practical concerns. These include the risk of iatrogenic viral transmission, potential impairment of wound healing, and the rare but severe complication of herpes simplex encephalitis (HSE), particularly in the context of surgical stress and transient perioperative immunosuppression.
Currently, there are no clear, evidence-based guidelines addressing the management of patients with active herpes labialis undergoing elective surgery under general anesthesia. This lack of consensus leads to significant variability in clinical decision-making. This article discusses perioperative risk considerations and management strategies reported in the literature, with a particular focus on the rationale for postponing elective procedures in the presence of active lesions.
Through the presentation of a case involving a patient scheduled for total thyroidectomy under general anesthesia who was found to have active herpes labialis, we aim to highlight this unresolved clinical issue and emphasize the need for clearer perioperative recommendations.

KEYWORDS

Anesthesia, Herpes, Infection, Labialis, Surgery

MAIN ARTICLE

INTRODUCTION

Herpes Simplex Virus (HSV) infection is a highly prevalent and contagious condition worldwide, with adult seroprevalence estimates ranging from 40% to 95% [1,2]. Following primary infection, HSV-1 typically establishes lifelong latency within the trigeminal ganglion [2,3]. Viral reactivation, clinically manifesting as herpes labialis, may be triggered by various factors, including surgical stress, fever, ultraviolet exposure, trauma, or transient immunosuppression [3–5].

In the perioperative setting, the presence of active vesicular lesions - representing the phase associated with the highest viral shedding - raises important safety concerns [6]. From a patient-centered perspective, there is a theoretical risk of viral dissemination or inadvertent inoculation into the surgical field or the central nervous system, particularly during head and neck or neurosurgical procedures. From an occupational standpoint, active herpes labialis constitutes a potential exposure risk for anesthesia providers, especially during airway management and endotracheal intubation [7].

Despite the high prevalence of HSV-1 infection and its frequent occurrence in anesthesia practice, universal evidence-based guidelines for the perioperative management of patients with active herpes labialis remain lacking. Consequently, decisions regarding the postponement of elective surgery are often based on individual risk–benefit assessment and institutional practice.

CASE REPORT

A 42-year-old female (euthyroid, BMI 28 kg/m²) was scheduled for elective total thyroidectomy for the management of a multi-hetero-nodular goiter. Preoperative evaluation revealed no significant comorbidities, and thyroid function tests were within normal limits.

On the morning of surgery, during the final assessment in the holding area, the anesthesia team identified a cluster of active vesicular lesions on the right side of the patient’s upper lip. The patient reported experiencing a tingling sensation the previous evening, followed by the appearance of vesicles a few hours before hospital arrival.

Given that the procedure was elective and that the surgical field involved close proximity to the oral cavity, the surgical and anesthesia teams opted to postpone the operation. The

decision was based on the high viral load characteristic of the vesicular stage and the associated risk of viral transmission during endotracheal intubation or surgical manipulation of the neck region. The patient was rescheduled three weeks later, ensuring she would be free of symptoms for at least one to two weeks prior to the new surgical date.

DISCUSSION

The primary clinical question is whether an active herpes lesion warrants the cancellation of surgery. For elective procedures, the consensus leans toward postponement. General anesthesiology recommendations suggest that for mild infections, elective cases should be scheduled only after the patient has been symptom-free for 1 to 2 weeks.[8,9]

In cases where surgery is urgent or emergent (e.g., life-saving neurosurgery or cancer-related procedures), the risk of delay may outweigh the risk of viral complications. However, if the risk of contamination is high—such as in neurosurgery procedures where CSF contamination could lead to HSE—cancellation must be strongly considered.

Herpes Simplex Encephalitis (HSE)is the most severe risk. it is rare but devastating condition which, if left untreated, carries a mortality rate of 70% [1,7]. Contamination of the surgical wound or the CNS (via needles or catheters) can theoretically lead to this condition.

Viral Reactivation and Spread due to surgical stress and the use of perioperative corticosteroids are known triggers for HSV reactivation. Studies have shown that up to 20% of patients undergoing trigeminal nerve surgery experience postoperative herpes reactivation. Transmission of HSV between patients and healthcare workers during airway management is also a well-documented risk.

If surgery must proceed, meticulous precautions are required [3]:

- Barrier Protection: Apply 5% acyclovir ointment to the lesions and cover them with a transparent adhesive dressing prior to induction to prevent contact spread.
- Hygiene Protocols: Laryngoscope blades and handles should be isolated immediately after use. Anesthesia providers must remove gloves and perform rigorous hand hygiene with 70% isopropyl alcohol.
- Pharmacological Options: Local anesthetics like lidocaine and prilocaine have demonstrated antiviral properties. They may inhibit virus-induced cell fusion by occupying sites within the plasma membrane. Clinical studies using in situ film-forming gels containing these anesthetics showed a reduction in healing time and psychosocial discomfort compared to traditional ointments.

Current literature suggests that regional anesthesia (spinal or epidural) is not contraindicated in patients with a history of recurrent HSV[10–12]. Studies of HIV-positive parturients and those with recurrent genital herpes indicate that these techniques can be used without increasing the risk of CNS infection or exacerbating neurological disease. However, the safety of regional anesthesia during a primary (first-time) HSV infection remains controversial due to a lack of data.

CONCLUSION

Active herpes labialis is a common perioperative dilemma with no formal guidelines for management. Elective surgery is generally best postponed until lesions resolve, but there is a clear need for evidence-based recommendations to guide anesthesiologists in balancing viral transmission risk, surgical urgency, and patient safety.

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