Should Antiviral Medications Be Considered Preoperatively for Microlaryngoscopy in Patients With a History of Recurrent Herpes Stomatitis?

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Summary: Infectious complications following phonomicrosurgery are rare. Reports of herpetic laryngitis are in the literature but none following microlaryngoscopy.

We present a case of a 55-year-old female who underwent microsurgical excision of a left vocal fold (VF) lesion and KTP ablation of bilateral vascular ectasias. Postoperative stroboscopy demonstrated severe bilateral VF edema, erythema, and ulcerations of the VFs, encompassing an area greater than the original surgical field. Initial management included voice rest, antibiotics, steroids, and aggressive reflux treatment. The patient experienced prolonged VF edema and poor voice outcome, which ultimately resolved over 6 months. Clinical diagnosis of herpetic laryngitis was presumptively made after the patient revealed a history of relapsing oral herpes incited by stress with a recent episode before microlaryngoscopy.

This case highlights the importance of thorough review of a patient's medical history. A protocol for preoperative (prophylactic) antiviral therapy and appropriate timing of surgery is presented for patients with history of herpes infection.

Key Words: Larynx–Herpes–Vocal fold–Infection–Surgery–Complication–Prevention.

INTRODUCTION

Microlaryngoscopy is an extremely safe procedure, with low rates of complications. Complications include mucosal injuries, dental injuries, and temporary lingual and/or hypoglossal nerve dysfunction.[1–4] Infectious complications following phonomicrosurgery are exceptionally rare, including one report of laryngeal abscess[5] and one case of Ludwig angina.[6]

Herpetic laryngitis occurs infrequently but is generally seen in the pediatric population.[7,8] There are scattered reports of herpetic laryngitis in adults in the literature.[9–14] However, there have been no reports to date of this infection in the postsurgical setting. We present what we believe may be the first description of herpetic laryngitis following microlaryngoscopy.

CASE REPORT

A 55-year-old Caucasian female music teacher and singer presented to the University of Pittsburgh Voice Center with a 1-month history of gradual dysphonia, following increased vocal demands at school. She was not on steroid or inhaler therapy, did not smoke, and had no known history of immunosuppression. Laryngostroboscopy demonstrated a small left anterior true vocal fold lesion and bilateral vascular ectasias. Initial conservative management of her voice complaints comprised voice therapy and pantoprazole 40 mg daily. On follow-up evaluation, despite compliance with her voice therapy and pharmacologic treatment, she had persistent symptoms and no change to her physical examination. She then underwent an unremarkable microsuspension laryngoscopy with cold steel excision of a benign left true-vocal fold subepithelial fibrous mass and potassium-titanyl-phosphate (KTP) laser ablation of bilateral vascular ectasias (Figure 1).

One week after surgery, laryngostroboscopy demonstrated severe bilateral vocal fold edema, erythema, and ulcerations, encompassing far more than the original surgical field (Figure 2). Initial management included voice rest, antibiotics, steroids, and aggressive reflux treatment. Additional treatment included extended voice rest and a prolonged high-dose steroid taper. Six weeks after her surgery, she underwent an in-office deep and superficial vocal fold injection with steroids for right vocal fold scar. Serial examinations over the next several months demonstrated prolonged vocal fold edema and stiffness, with associated severe and prolonged dysphonia.

Clinical diagnosis of herpetic laryngitis was only presumptively made 6 weeks postoperatively, after the patient finally revealed a history of relapsing oral herpes incited by stress. At that time, she also disclosed a recent episode a few days before microlaryngoscopy as well as daily valacyclovir as a home medication. This information had *not* been reported preoperatively. The patient was continued on her routine home dose of daily antiviral therapy. The patient experienced prolonged vocal fold edema, with slow progressive improvement over the ensuing months (Figures 3–5). Complete resolution of her dysphonia allowed the patient to return to teaching and singing by 6 months postsurgery.

DISCUSSION

Complications of phonomicrosurgery occur infrequently.[1–4] Infectious complications are particularly rare, with only two previously reported cases in the literature. Zapanta and Bielamowicz[5] described a case of laryngeal abscess in an adult female after vocal fold injection with micronized AlloDerm (Cymetra, LifeCell Corporation, Branchburg, NJ). This was treated with intravenous steroids and antibiotics, without the

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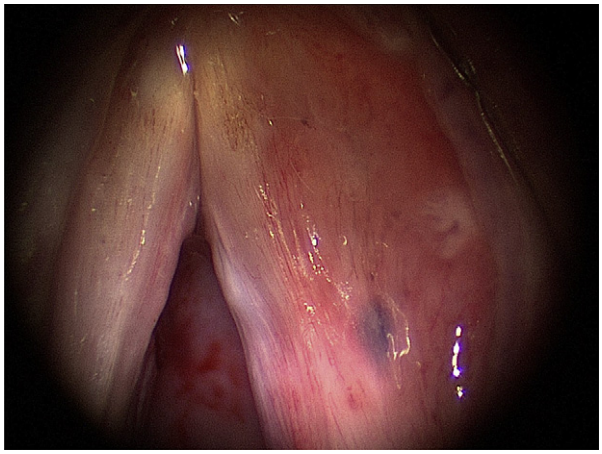

FIGURE 1. Intraoperative photograph following microsurgical excision of left anterior true vocal fold lesion and bilateral superior true vocal fold KTP laser ablation of vascular lesions.

need for surgical intervention. Pelaz et al[6] reported a case of Ludwig angina in an adult male following microlaryngoscopy to treat left vocal fold Reinke edema. The authors ascribe this infection to "erosion of the internal face of the jaw caused by the laryngoscope." Management comprised intravenous antibiotics and steroids as well as surgical drainage.

Multiple reports describe herpetic laryngitis in the pediatric literature,[7,8] but this type of infection is less commonly seen in adults. Herpetic laryngitis has been reported both in immunocompetent as well as immunocompromised patients and has been described in the pediatric intensive care unit.[7–14] However, none of the prior reports in the literature describe this infection in the postsurgical setting.

Our patient presented with severe laryngeal edema and erythema as well as ulcerative lesions following phonomicrosurgery. Interestingly, these findings encompassed far more than the original operated-upon area, with involvement of the larynx globally despite the underlying pathology involving only the free edge of the midmembranous left true vocal fold (benign lesion) and anterior-most aspects of the superior true vocal folds bilaterally (vascular ectasias) (Figure 1). There were no other identifiable causes for these postoperative findings. All equipment used in the course of her surgery was thoroughly examined. There were no equipment defects, and no evidence of contamination, with all standard sterilization techniques and guidelines fully adhered to. Biopsy was considered during her initial postoperative course; however, this was deferred because of her continued vocal fold edema and severity of her dysphonia, in hopes of not further aggravating her already-inflamed larynx and to prevent further injury to her vocal folds. Laryngeal culture was deferred because of our concern regarding contamination of results but might have provided additional information. The patient did not develop an oral outbreak during her acute postoperative course. This may be related to her recent oral outbreak immediately before surgery or to adequate suppression from her maintenance antiviral therapy.

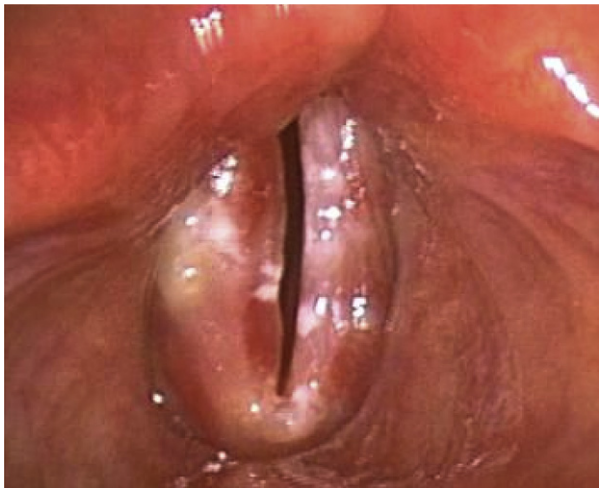

FIGURE 3. One month after phonomicrosurgery. Continued bilateral true vocal fold edema and erythema, right side worse than the left.

FIGURE 2. One week after phonomicrosurgery. Diffuse bilateral true vocal fold exudate, edema, and erythema, encompassing entire larynx.

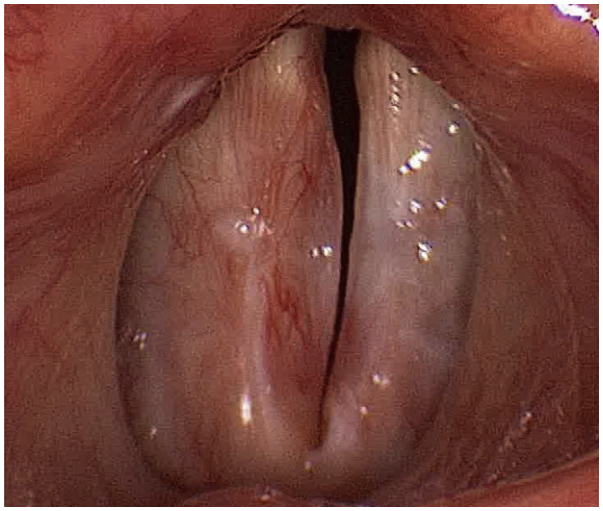

FIGURE 4. Three months after phonomicrosurgery.