



Microlaryngeal Surgery

Microlaryngeal surgery, also known as phonosurgery, is a workhorse procedure that deals with a variety of laryngeal conditions, including benign vocal fold lesions, vocal fold paralysis, vocal fold scarring, vocal fold leukoplakia or cancer, and airway stenosis. It is performed under general anesthesia, with or without a laser.

Pre-Operative Preparations

- Evaluate and educate the patient regarding their diagnosis.
- Motivate the patient to be compliant with behavioral changes if applicable.
- Depending on the laryngeal diagnosis, non-surgical treatments need to be maximized prior to proceeding with microlaryngeal surgery. These include, but are not limited to, smoking cessation, voice therapy, and reflux management.
 - Chapter 11. Perioperative care for phonosurgery. In: Rosen CA, Simpson CB. *Operative Techniques in Laryngology*. 1st ed. New York, NY: Springer; 2008: 77-79.

Pertinent Surgical Steps

- Communicate with anesthesiologist regarding method of ventilation (intubation, jet ventilation, tracheotomy).
- Following anesthesia induction, position the patient in a sniffing position (head extension and neck flexion).
- Select the largest possible laryngoscope for laryngeal exposure; may need to flex neck maximally and/or apply anterior cricoid pressure to optimize view.
- Suspend laryngoscope.
- Photodocument laryngeal lesion(s) using 0°, 30°, and 70° telescopes.
- Bring microscope into the surgical field and use the highest power magnification for visualization.
- Consider submucosal infusion with 1% or 2% lidocaine with 1:100,000 epinephrine to identify plane of dissection and hemostasis.
- Use the most appropriate microlaryngeal surgical instruments or laser setting for the intended laryngeal lesion.



- Ensure surgeon ergonomics while operating.
 - Chapter 10. Principles of Phonomicrosurgery. In: Rosen CA, Simpson CB. Operative Techniques in Laryngology. 1st ed. New York, NY: Springer; 2008: 63-75.

Prevention of Complications

- Maxillary dental guard for teeth protection or soft sponge/gauze on the maxillary alveolar ridge in edentulous patients to prevent mucosal laceration.
- Atraumatic insertion of laryngoscope.
- Minimize duration of suspension to prevent tongue swelling, tongue weakness, or taste change.
- Preserve as much normal vocal fold mucosa as possible during dissection.
- Exercise laser safety precautions if a laser is being used.
- Voice rest following surgery.
 - Chapter 12. Management and prevention of complications related to phonomicrosurgery. In: Rosen CA, Simpson CB. Operative Techniques in Laryngology. 1st ed. New York, NY: Springer; 2008: 81-85.