

Anesthetic Management of a Pregnant Patient with Severe Tracheal Stenosis Undergoing Microdirect Laryngoscopy with Incision, Dilation and Steroid Injection

Jason Srnec, MD; Liliana Goelkel Garcia, MD; Iryna Chugaieva, MD
Department of Anesthesiology, University of Minnesota Medical Center, Minneapolis, MN

LEARNING OBJECTIVES

- ❖ Understand the unique challenges of subglottic stenosis in gravid patients.
- ❖ Discuss anesthetic management of a gravid patient undergoing microdirect laryngoscopy.

BACKGROUND

- ❖ Most cases of subglottic stenosis (SGS) arise after traumatic, prolonged intubation, or a tracheostomy.^(1,2)
- ❖ Pregnancy physiology makes SGS challenging to diagnose and manage.^(3,4)
- ❖ Presentation of dyspnea rather than stridor can go unnoticed until symptoms are severe.
- ❖ Some cases are wrongfully diagnosed with asthma.⁽¹⁾
- ❖ We present a case of SGS that required intervention prior to delivery.

CASE REPORT

- ❖ A 24-year-old female
- ❖ G3P2002 at 35w4d
- ❖ Past medical history of idiopathic seizure requiring intubation
- ❖ Developed dyspnea during her pregnancy
- ❖ Presented to Otorhinolaryngology clinic for evaluation at 35w0d and found to have significant subglottic stenosis
- ❖ Low socioeconomic status made appointments difficult
- ❖ Lived >1 hour away from hospital in rural Minnesota
- ❖ Multi-disciplinary meeting including Otorhinolaryngology (ENT), Maternal Fetal Medicine (MFM), and Anesthesiology held

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INTRA-OPERATIVE

- ❖ Case started in reverse Trendelenburg with left tilt, continuous fetal heart tone, and standard ASA monitors.
- ❖ Abdomen was prepped and draped. MFM team was ready to perform emergency Cesarean Section (CS). ENT was present with Ossoff laryngoscope, rigid bronchoscope, and jet ventilation set up.
- ❖ After propofol and succinylcholine induction, gentle mask ventilation verified patient could be ventilated. Propofol drip was started for maintenance. A 5.0-ETT could not be advanced beyond vocal cords, but adequate ventilation achieved with ETT above stenotic area, with cuff inflated.
- ❖ We deflated the cuff and removed ETT to start CO2-laser excision under intermittent ventilation. Within 30 seconds of apnea patient's saturation dropped to 87%. Procedure aborted and ventilation resumed after placement of 5.0-ETT above stenotic area.
- ❖ Procedure converted to incision, dilation, and steroid injection. Patient and fetus tolerated procedure without complications.



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POST-OPERATIVE

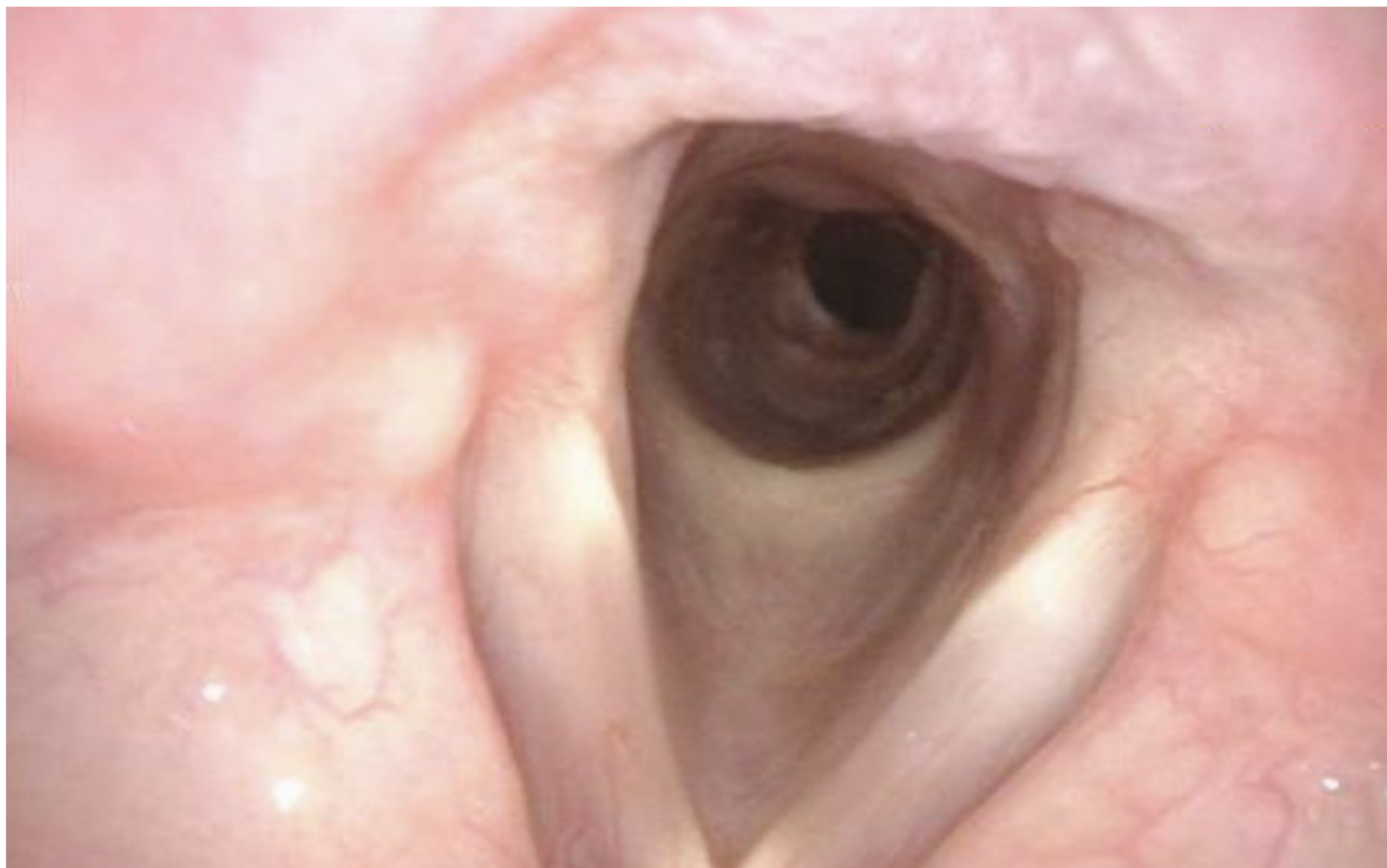
- ❖ Patient was discharged after routine recovery.
- ❖ Patient followed up with Otorhinolaryngology and determined safe to proceed with delivery at home hospital. Patient underwent planned induction at 39w1d and had a spontaneous vaginal delivery with epidural.

CONCLUSION

- ❖ Subglottic stenosis in pregnancy is rare but potentially life threatening.
- ❖ Backup plans included rigid bronchoscopy, jet ventilation, and surgical airway.
- ❖ Adequate planning is paramount, as is the presence of all members of care team prior to induction of anesthesia including MFM and NICU team on standby in case emergency CS is needed.

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Department of Anesthesiology