

Laser-assisted Endoscopic Submucosal Medial Arytenoidectomy (LESMA) for Treatment of Bilateral Vocal Fold Paralysis or Posterior Glottic Stenosis

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ABSTRACT

Objective : Several procedures have been developed to treat a severely compromised airway obstruction in patients with bilateral vocal fold paralysis (VFP) or posterior glottic stenosis (PGS). In this study, we describe our experiences of the managements of bilateral VFP and PGS by unilateral laser-assisted endoscopic submucosal medial arytenoidectomy (LESMA), which is of posterior transverse partial cordotomy and submucosal medial arytenoidectomy CO₂ laser.

Method : LESMA was performed in 12 patients, 7 with bilateral VFP and 5 with PGS. Eight patients already had tracheostomas, and the remaining 4 patients under went supraglottic Venturi jet ventilation at the time of surgery.

Results : Restoration of the airway was initially

successfully achieved in 10 patients(83.3%). Revision LESMA was performed in two patients, and result edinan over all rate 91.7%(11/12) for successful restoration of the airway. Sevenpatients were decannulated without further operation, but one patient with PGS could not close the tracheostoma. The possible causes of this failure were surgeon's inexperience during early cases of LESMA or thick scar tissue in this high grade PGS patient. No synechia or granulation tissue formation was observed in the present study. The results of pulmonary function tests and voice analyses were satisfactory.

Conclusion : LESMA was found to be an effective and safe means of managing bilateral VFP and PGS.

Keywords : vocal fold paralysis, posterior glottic stenosis, medial arytenoidectomy, CO₂ laser