**Objective:** Supraglottic hyperfunction is a compensatory behavior encountered in endoscopic evaluation of patients with glottic incompetency. It can have multiple configurations that are a combination of anteroposterior and lateral vectors. Hyperfunction is pronounced in unilateral vocal fold paralysis (UVFP), and can obfuscate assessment of the true vocal folds. Recent data indicates that lateral hyperfunction is caused by ventricularis muscle contraction, which is innervated by the ipsilateral recurrent laryngeal nerve [1]. We sought to characterize supraglottic hyperfunction patterns in patients with UVFP secondary to surgical manipulation.

**Hypothesis:** Lateral supraglottic hyperfunction is asymmetric with greater excursion of the false vocal fold (FVF) contralateral to the side of UVFP.

**Methods:** Recorded videostroboscopy exams of 10 consecutive patients with complete UVFP from surgical manipulation (presenting <3 months post-operatively) were graded by two blinded, independent reviewers. Supraglottic hyperfunction characteristics were scored for direction (AP or lateral) and laterality with respect to side of paralysis (primary outcome). Kappa tests measured interrater reliability.

**Results:** Patients were evaluated a median of 63.5 days post-surgery. All (10/10) had asymmetric lateral FVF hyperfunction with predominant medial excursion by the FVF contralateral to the immobile vocal fold (kappa=1, p<0.01). Petiole deviated toward the immobile vocal fold in 70% of cases (kappa=1, p<0.01). AP hyperfunction occurred in 50%, but its presence and degree was less agreed upon by reviewers (kappa=0.4, p=0.09).

**Conclusions:**
1. Supraglottic hyperfunction is consistently present in UVFP
2. Asymmetric lateral FVF hyperfunction with maximum medial excursion of opposite FVF was universal
3. Petiole usually deviates toward paralyzed fold
4. Understanding supraglottic function in UVFP may aid understanding of laryngeal physiology and diagnostic accuracy

**References:**