**General Otolaryngology**

**A Study of the PEAK PlasmaBlade TnA in Adult Tonsillectomy Compared to Traditional Electrosurgery**

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**Objective:** Recently, the use of low temperature pulsed radiofrequency (RF) energy has emerged as a method for efficient tissue dissection with minimal thermal damage. When used for tonsillectomy, anecdotal reports have cited improved recovery compared with traditional electrosurgery (ie, Bovie). We evaluated this technology in adults undergoing subcapsular tonsillectomy.

**Method:** Twenty adults were prospectively enrolled in this pilot study. Subjects were randomized to tonsillectomy with the PlasmaBlade (PB) or traditional electrosurgery (ES). Intraoperative time and blood loss were recorded; postoperatively, subjects blindly reported visual analog scale pain scores, narcotic consumption, diet volume, and activity level using a validated form.

**Results:** The population age (34.7 ± 18.7 years, P = .75) and BMI (24.7 ± 3.9 kg/m², P = .44) were equivalent. Operative time was also equivalent for both technologies (7:36 ± 1:58 min, P = .99) with PB subjects demonstrating a 69% reduction in IBL (1.6 ± 1.8 vs 5.3 ± 7.9mL, P = .02) compared with ES. Postoperatively, PB subjects demonstrated a 40% (2.5 ± 1.2 vs 4.1 ± 0.7 Tylenol-Codeine/d, P = .002) reduction in narcotic consumption over the 10-day monitoring period. Modest improvements in activity level (6%, P = .83), diet volume (20%, P = .32), and VAS pain score (12%, P = .41) were also reported. However, these were not statistically significant.

**Conclusion:** The use of this new low-thermal damage electrosurgical technology for adult tonsillectomy appears to offer several advantages over traditional electrosurgery, notably in reducing narcotic consumption in the postoperative period. Larger population-based studies should be conducted to further examine these endpoints.

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**Automated Tube Deployment: Success Demonstrated in OR**

Charles A. Syms, MD (presenter); Andrew R. Gould, MD; Jacob W. Zeiders, III, MD; Kenneth D. Faw, MD

**Objective:** Investigate the safety and efficacy of a novel automated tympanostomy tube delivery system for the creation of a myringotomy and the placement of a tympanostomy tube for patients presenting with chronic otitis media with effusion and/or recurrent acute otitis media.

**Method:** A prospective, multicenter, single arm clinical study enrolled 53 subjects. Tube placement was performed in an operative setting using the Acclarent Tympanostomy Tube Delivery System (TTDS). Patients underwent physical examination and audiometry preoperatively and at one week postoperatively.

**Results:** A total of 53 subjects (47 subjects 5 years of age and younger) were enrolled in the study at 4 United States centers. From these subjects, 101 ears were enrolled and 5 were excluded because of study criteria related to condition of the tympanic membrane. There were no serious device-related adverse events. The primary efficacy endpoint, successful tube deployment across the tympanic membrane, was achieved: 95 of 101 (94%) attempted deployments in the cohort were successful. Tube retention was also evaluated as a secondary endpoint, and 94 of 95 (99%) tubes placed with the device were retained at follow-up.

**Conclusion:** The Acclarent TTDS is a safe and effective device for placement of tympanostomy tubes in patients with chronic otitis media with effusion and recurrent acute otitis media. Given the device’s safety, efficacy, and speed of tube delivery, further investigation of its in-office application under local anesthesia is warranted.

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**Characteristics of Dysphagia after Cerebellopontine Angle Surgery**

Heather M. Starmer, MA (presenter); Alexander T Hillel, MD; Howard W. Francis, MD; Lee M. Akst, MD; Simon R. Best, MD; Wade W. Chien, MD; Yuri Agrawal, MD

**Objective:** Describe swallowing disorders encountered after Cerebellopontine Angle (CPA) surgery as well as to explore variables associated with increased incidence of postoperative dysphagia.

**Method:** Retrospective chart review of 181 consecutive patients undergoing surgical excision of CPA pathology from January 1, 2008, to December 31, 2010, at Johns Hopkins Hospital. Presence and characteristics of dysphagia were determined by speech pathologist reports. Clinical variables were extracted from the electronic medical record.

**Results:** Postoperative dysphagia was identified in 57 out of 181 patients (31%). Oral, oropharyngeal, and pharyngeal deficits accounted for 49%, 37%, and 12% of dysphagic symptoms respectively. Facial nerve weakness in the immediate postoperative period was noted in 91% of dysphagic subjects (mean House-Brackmann score of 4) compared with 43% of those without dysphagia (mean House-Brackman score of 2). Diet alterations were required for 65% of dysphagic individuals, and an additional 9% required tube-feeding. Common findings during Videofluoroscopic Swallowing Studies (VFSS) were pharyngeal residue, reduced pharyngeal constriction, and anterior bolus loss. Abnormal Penetration-Aspiration Scores (≥3) were found in 59% of those undergoing VFSS.

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