



Debulking of Laryngeal Lesions with Coblation®

Coblation can be used effectively in the treatment of laryngeal lesions and can be an ideal tool for reducing the mass in sessile type lesions. It has been demonstrated that Coblation tissue injury is limited to the lamina propria and healing appears comparable with other technologies commonly used in laryngeal surgery¹.

Equipment and Procedure Set-Up

- 1 When the PROcise™ LW Wand is connected to the Controller, the default settings of 6 and 3 should appear on the Coblator LEDs respectively. The settings of ABLATE 5 and COAG 3 is optimum for treatment of papilloma while a higher setting of ABLATE 7 AND COAG 3 may be better for other types of lesion removal.



- 2 Connect the Wand's suction tubing to the OR suction separate from the Yankheur. Suction should be set to a lower setting (approximately 250 psi).
- 3 Set the saline flow to a minimal intermittent drip. Very little saline is required especially when treating papilloma lesion tissue.
- 4 To ensure optimal visualization throughout the procedure, the Laryngeal Coblation Wand can be used with standard laryngoscopes and microscopes. Use the largest laryngoscope that can be accommodated. Particularly useful are those with proximally and distally adjustable blades.

Standard cuffed microlaryngeal tubes are adequate for protection of the lower airways from any excess saline. This can be aided by gentle packing above the balloon with wet cottonoids. Chance contact of the Coblation Wand with the tube will not cause damage to the tube and the risk of airway fire with Coblation is eliminated due to the low heat generated and the lack of spark or ignition medium. Special endotracheal tubes used with lasers are not necessary. Venturi ventilation has also been used successfully when



Coblation is used. A head down (Trendelenberg) position should be utilized to ensure any excess saline flows into the pharynx and not the trachea.

- 5 The malleable shaft of the Wand can be gently bent if necessary to allow for direct access to the anatomy. Care should be taken not to over bend the Wand, especially at the tip.

Treatment Technique for Papilloma Lesions

NOTE: Treatment goal is to restore optimal airway and voice, while minimizing underlying tissue fibrosis for a variable time interval. This disease cannot be cured via surgical intervention.

- 1 The tissues are first dabbed with cotton soaked in 1:1000 epinephrine to reduce bleeding.
- 2 ABLATE setting of 5 and COAG 3 is best suited to delicate papilloma work where relatively dry fields aids meticulous removal and coagulation use is minimal.
- 3 Papilloma is best treated using the suction on the Wand to pull the lesion gently away from the underlying tissue. The lesion can then be ablated with minimal physical trauma to the underlying tissue.

NOTE: Use caution and ablate in short bursts (0.25 second to 0.5 second) using quick on and off depressions of the yellow ABLATE foot pedal.

- 4 Keep the active portion of the electrode tip within vision and avoid contact with any tissue unintended for ablation.
- 5 This treatment process is normally bloodless, but if any bleeding is encountered, it can be controlled with short (0.5 second) bursts of coagulation set on 3. This setting is adequate for any size of vessel found in this condition and should not be increased to avoid any chance of excessive heating of the underlying tissue.

Debulking of tumors

- 1 Once an adequate view has been obtained, removal of excess tissue can be accomplished using the Coblation Wand to excise across the tumor near the base using a gentle brushing motion.
- 2 With an ABLATE setting of 7 and COAG set on 3, any bleeding is easily controlled.
- 3 Further reduction of residual disease can then be performed by surface ablation on setting 7-9 until the desired clearance is achieved.

figure 1



Before Coblation of papilloma lesions



After Coblation of papilloma lesions

figure 2



Pulling lesion away from the wall using Wand suction



Wand in contact with sessile papilloma lesion

figure 3



Tumor

References:

- 1 Original research –Abstract Presented ASOHNS 2008- Bipolar Radiofrequency Ablation Eliminates the Risk of Airway Fire in a Mechanical Model: Soham Roy, Lee P Smith.



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