

# Coblation® Tonsillectomy



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## TECHNIQUE GUIDE

### Procedure Overview

The EVac™ 70 Plasma Wand™ can be used either for tonsillectomy or for tonsillotomy. These two techniques involve Coblation, a unique non-heat driven process of molecular disintegration, resulting in precise ablation of tissue. Both ablation methods result in less bleeding and less post-operative pain than in traditional tonsillectomies<sup>1, 2</sup>.

### Coblator® II Equipment Set-up

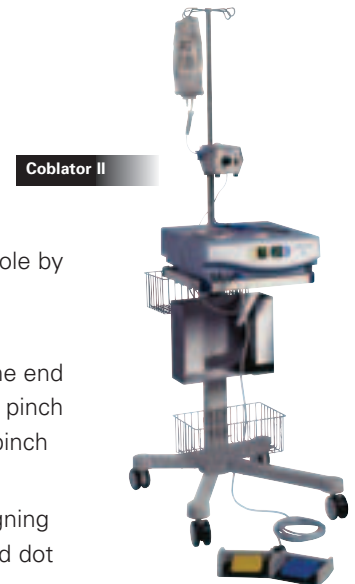
- 1 Turn on the power switch on the Controller. Attach the Flow Control Valve Unit to an IV pole by placing the Clamp onto the shaft of the pole. Hang a 500-ml or 1000-ml bag of normal saline solution on the IV pole.
- 2 Plug one end of the Flow Control Cable into the rear of the Flow Control Valve Unit and one end into the front of the Controller. Press the Valve switch up toward the green dot to open the pinch valve. Spike the saline bag with IV tubing extension and thread the IV tubing behind the pinch valve. Press activation switch down to close the valve.
- 3 Connect Patient Cable to the EVac Wand at the end labeled Connect to ArthroWand®, aligning arrow and dot on Cable and Wand. Connect Patient Cable to Controller, aligning arrow and dot on Cable and Controller. Connect suction tubing and IV tubing to the EVac Wand.
- 4 Open the roller clamp fully on the Wand and the giving set. Make sure that you get maximum saline flow when pressing the ablation or Coag pedal. Additionally, make sure that you have strong and efficient suction.
- 5 Set Controller power between set points 6-9, depending upon surgeon preference and based on rate of tissue ablation.

NOTE: Saline should ONLY flow when pressing the steps on the ablation or coagulation Foot Pedal.

### Procedure Preparation

- 1 Position the patient as for routine tonsillectomy with shoulder roll, neck extension, and head support.
- 2 Intubate using a cuffed oro-tracheal tube. For small children, a non-cuffed tube can be used.
- 3 Useful tools: Boyle-Davis mouth gag, a pillar retractor and Luc's non-traumatic forceps.
- 4 Prep and drape the patient as for routine tonsillectomy. Use the Boyle-Davis mouth gag to access the oropharynx and to hide the tracheal tube.
- 5 To avoid unintended tissue ablation, DO NOT activate the Wand while in contact with other structures in the oral cavity.

Follow normal guidelines when choosing anaesthetic method, optimal surgical field is achieved by oral intubation and if a Boyle-Davis mouth gag is used to hide the tracheal tube.



## Tonsillectomy Procedure

An operating microscope with 300 mm lens will help you to visualise structures and vessels well and in addition a useful tool for training and documentation, however a microscope, is not mandatory.

- 1 Grasp the tonsil using a non-traumatic (e.g. Luc's) forceps and pull it towards the midline and up.
- 2 Hold the Wand perpendicular to the anterior tonsil parenchyma.
- 3 While retracting the tonsil medially, begin dissection by depressing the left (yellow) foot pedal in short bursts. If you have good visibility of the lower lobe, start the dissection at the lower lobe. Otherwise, start dissection at the upper lobe. Paint the tissue with VERY LIGHT pressure – applying too much pressure may cause too deep penetration resulting in bleeding and clogging of the suction channel. Keep the dissection to the peritonsillar space and avoid penetrating the tonsil capsule. Penetration capsule or the muscle layer may cause excessive bleeding.
- 4 If a bleeding vessel is encountered, place the Wand directly on the vessel and depress the coagulation Foot Pedal for approximately 1 second to achieve haemostasis (prolonged coagulation is not effective). Deal with bleeders as they are encountered rather than waiting as this makes for a cleaner field and more accurate haemostasis.
- 5 The suction/irrigation system keeps the area free of blood to allow accurate application of coagulation. Remember to use maximum flow rate (roller clamp fully open) controlled by the flow control unit.



Tonsils

## Tonsillotomy Procedure

As an alternative to the technique described above, you can do a tonsillotomy by ablating the tonsil. Once the anterior pillar is retracted, brush the Wand across the tonsil surface with light pressure to remove tissue layer by layer until the muscles are visible through the tonsil capsule. Again, it may be easier to differentiate tonsil tissue from the tonsillar capsule if the operating microscope is used., although this is not essential, only easier.

## Post-operative Instructions

Follow local guidelines.

Guidelines at the Blackburn Royal Infirmary:

- 1 Normal diet and discharge from hospital the same day, with a minimum post-op stay of 4 hours.
- 2 No antibiotics.
- 3 Paracetamol or ibuprofen elixir on a p.r.n. basis in children and paracetamol/codeine preparations, +/- diclofenac in adults. Patients have been found to use fewer analgesics than after conventional tonsillectomy.

1 Paediatric Coblation Tonsillectomy: RH Temple, MS Timms; International Journal of Pediatric Otolaryngology 61(2001) 195-198.

2 Coblation Tonsillectomy Versus Dissection Tonsillectomy: Postoperative Haemorrhage: A Belloso, A Chidambaram, P Morar, MS Timms; The Laryngoscope 2003; 113(11): 2010-2013.



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