

Radiofrequency Micro-Bipolar Tonsillectomy

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The combination of the microsurgical method using a microscope together with bipolar coagulation for tonsillectomy was first described by Andrea [1]. A significant reduction in postoperative morbidity was reported. A modified technique with similar success in more than 1.000 tonsillectomies uses a new instrument which incorporates not only precise bipolar coagulation, but also suction and excellent dissection capabilities. The use of a magnification device, such as loup lenses or a microscope further enhances control during the intervention. Tonsillectomies can be performed very quickly with little, but precise and effective bipolar coagulation while most of the dissection is "cold" or "blunt". The glossopharyngeal nerve can be identified and spared.

Introduction: Andrea reports excellent results with a method dubbed "microbipolar tonsillectomy" [1]. He uses regular bipolar forceps for tonsillar dissection under magnification with the microscope. Encouraged by our own results using the Andrea

Material and Methods: While the capsule of the tonsils and the surrounding tissue are separated, vessels are visually identified and sealed with bipolar current before retracting into the muscles (Fig. 2). We use the Andrea approach to dissection of the



Fig. 2: Tonsillar dissection

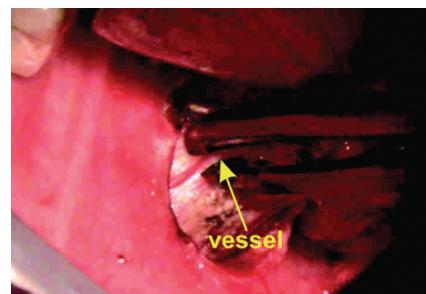


Fig. 4: Small vessel before coagulation

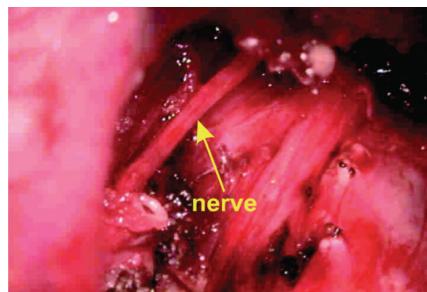


Fig. 3: Identification of glossopharyngeal nerve



Fig. 5: Wound immediately after tonsillectomy

technique, we have developed a new kind of clamp that offers several functions in one instrument: Grasping, dissection, bipolar coagulation, and extracting blood and smoke by suction – the To-BiTETM clamp (REF 70 09 60SG, Sutter, Germany). Both branches are connected via a joint similar to that of scissors or graspers which actively open and close the instrument.

tonsils starting with the inferior pole. The glossopharyngeal nerve can thus be identified and spared, preventing damage to the gustatory senses (Fig. 3).

In surgical practice, it is absolutely necessary to use an operating microscope for magnification. Magnification greatly helps identifying even small vessels before they are separated (Fig. 4). Magnification is a vital com-



Fig. 6: CURIS® RF unit (Sutter, Germany)

ponent of this surgical approach. Another type of magnification, such as binocular loup lenses, can be employed. Loup lenses are less cumbersome and offer greater freedom of movement. The magnification is sufficient to adequately visualize all relevant structures. Magnification is capable of significantly improving the outcome of such a "simple" procedure as a tonsillectomy.

Results: In a series of more than one thousand tonsillectomies, this special approach generally resulted in little postoperative pain, hardly any bleeding during surgery as well as a significant reduction of postoperative bleeding (Fig. 5). This confirms earlier findings on micro-bipolar tonsillectomy [1,2]. Major vessels could be sealed prior to cutting. In many cases we were able to preserve the glossopharyngeal nerve. The newly designed To-BiTETM clamp combining four functions in one instrument is a safe and effective tool for performing tonsillectomies. Vis-à-vis the traditional approach, it seems to make tonsillectomies faster and easier, especially when combined with a magnification tool such as a microscope or binocular loup lenses.



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References: 1. Andrea, Mario. "Microsurgical bipolar cautery tonsillectomy." Laryngoscope 103 (10/1993): 1177-1178. 2. Brodsky, Linda et al. "Microbipolar Dissection vs Cold Knife/Suction Cautery Tonsillectomy in Children: Preliminary Results of a Prospective Study." Acta Otolaryngolica, Suppl 523 (1996): 256-258



Fig. 1: To-BiTETM (REF 70 09 60SG), bipolar clamp

Ordering Information

Featured Product



870060 – To-BiTE™ bipolar tonsillectomy set

Qty.	REF	Description
1	700960SG	To-BiTE™ bipolar tonsillectomy forceps, non-stick
1	370154R	Bipolar (CURIS®) cable for To-BiTE™



870010 – CURIS® basic set with single-use patient plates

Qty.	REF	Description
1	360100-01	CURIS® radiofrequency generator (incl. mains cord, user's manual and test protocol)
1	360110	Footswitch two pedals for CURIS® (cut & coag), 4 m cable
1	370154L	Bipolar cable for CURIS®, length 3 m
1	360704	Monopolar handpiece (pencil) cut & coag, shaft 2.4 mm, cable 3 m
1	360236	Cable for single use patient plates, length 4.5 m
1 (x50)	360222	Safety patient plates, single use, packing 5 x 10 pcs. (not shown)

*Optional

1 360226 Patient plate with cable, re-usable, length 4 m



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