# Procedure Guidelines for **bipolar Radiofrequency Volume Reduction (RaVoR™) of the Tongue Base**





Fig. 1: Puncture sites on the tongue base for the application of radiofrequency.

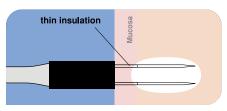


Fig. 2: Correctly placed RaVoR™ bipolar electrode. Complete insertion with the thin insulation layer protects the mucosa from surface lesions.



Fig. 3: Illustration showing the correct position of the probe in the tissue. Complete insertion with the thin insulation layer prevents surface lesions.

#### Indications and contraindications

Stiffening of the tongue-base for treatment of mild to moderate obstructive sleep apnea and retrolingual obstruction. There are no specifically known contraindictations for RF surgery.

#### **Patient preparation**

We recommend local anesthesia, perioperative sedation with e.g. midazolame and cardiorespiratory monitoring. We also recommend perioperative intravenous antibiotics prophylaxis with e.g. cefazolin 2g. To administer the anesthetic apply a surface anesthetic (e.g. lidocaine spray) and inject a local anesthetic together with a vasoconstrictor (e.g. lidocaine 2% plus adrenaline 1:200 000). Inject four times in a diamond-shaped pattern coming from median and on the level of or dorsal to the papillae vallatae (Fig. 1). Inject 2 to 3 ml of local anesthetic in each site (a total of about 10 ml). Do not use defective or damaged instruments to avoid the risk of burns.

#### **Intervention of instruments**

Insert the application probe (REF: 70 44 99) (Fig. 3) along the anesthetized sites – in a diamond-shaped pattern and coming from median and on the level or dorsal to the papillae vallatae (Fig. 1). Pull the tongue as much forward as possible, and insert the needle with the thin insulation layer (Fig. 2). In the case of a second session, choose a different puncture site close to the first one. Insert the needle vertically if possible. There will not likely be any changes to the mucosa.



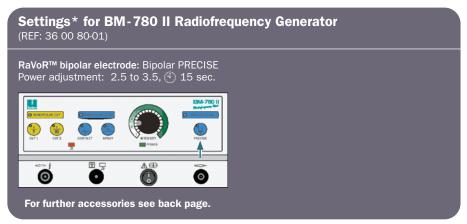
Fig. 4: RaVoR™ bipolar electrode for the tongue base, single-use (REF: 70 44 99)



Fig. 5: Bipolar adapter RaVoR™ single-use (REF: 37 38 51)

### Postoperative treatment

Specific postoperative treatment is not required. If necessary, prescribe analgetics (paracetamol or diclofenac) and continue the (oral) antibiotics prophylaxis for five days. Tell your patients that the therapeutic effect will occur with a delay. In the days following surgery, the symptoms may temporarily get worse due to postoperative tissue swelling.



<sup>\*</sup> Always start with the lowest settings to achieve the desired effects. If necessary, increase the settings stepby-step until the desired effect is achieved. This may even be 50 watts or higher. The settings may differ from patient to patient, from tissue to tissue, and have to be adjusted accordingly.

Please consider that this information is not meant to serve as a detailed treatment guide.

## **Recommended products for this treatment**





RaVoR™ (Radiofrequency-Volume-Reduction) incl. Adapter for BM-780 II

Qty.	REF	Description
1	70 44 99	<b>RaVoR™</b> bipolar electrode for the tongue base, working lenght: 110 cm
1	51 38 51	Bipolar Adapter Sutter BM-780 II for RaVoR™ bipolar electrodes, single-use





BM-780 II Radiofrequency Generator

Basic Equipment

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	Qty.	REF	Description	
	1	36 00 80-01	<b>BM-780 II</b> Radiofrequency generator (incl. mains cord, user manual, test protocol and instruction CD-ROM)	
	1	36 01 05	Foot switch, protection class IP X8	
	1	37 01 38 L	Bipolar silicone cable, length: 4.5 m	
	1	36 02 18	Monopolar pencil for Ø 2.4 mm shaft electrodes, cable length: 4 m $$	
	1	36 02 36	Cable for single-use patient plates, length: 4.5 m	
available patient plates:				
	1 (x 100)	29 00-5	Single-use patient plate, split, for adults and children, PU 20 x 5 pcs.	
	1 (x50)	95 80 04	Single-use patient plate, split, for adults, PU 10 x 5 pcs.	
	1 (x50)	95 80 05	Single-use patient plate, split, for children, PU 10 x 5 pcs.	
	1	36 02 26	Re-usable rubber patient plate	

Product availability is subject to regulatory approval in individual markets. Products may therefore not be available in all markets. Lengths for orientation purposes; may vary slightly.

