

4 MHz Radiofrequency Technology for Volumetric Turbinate Reduction: RF Generator CURIS® vs BM-780 II

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For patients suffering from obstruction of the nose due to hypertrophy of the inferior turbinates, soft-tissue volume reduction by means of sub-mucosal reduction with a shaver, various cold steel techniques or radiofrequency may be the treatment of choice (1). At our clinic indications have ranged from hyper-reactivity to allergic hypertrophy and hypertrophy in sleep disordered breathing. According to Stefanini et al. the incidence of nasal obstruction in a random population is 33.3 %, 37.7 % of which are again caused by inferior turbinate hypertrophy (2). In our search for the least invasive method for turbinate reduction we tried out the new RF generator CURIS®.



Fig. 1: Bipolar "Binner" probe (Sutter, Germany) REF 70 04 62

Methods: Five years ago we began using the RF generator BM-780 II for radiofrequency volume reduction of the inferior turbinates together with the bipolar RaVoR™ needle electrode, type "Binner", with protective insulation (Ref. 70 04 62) (6,7). Each turbinate was treated with three punctures under local anesthesia at a power setting of 2.5. Two punctures were made close to the head of the turbinate and one in posterior direction. Energy was applied for 8 seconds or until the mucosa began to turn white. Patients stayed in the outpatient ward for one hour. When they were released, they were advised to use a local ointment for 4 to 6 weeks post-operatively and Nabic (NaHCO₃) nose spray for 2 weeks. Subsequently no nose bleedings occurred. If necessary, patients continued the use of an anticoagulant. Results were satisfying while crusting in the nose remained the main complaint in our center. Crusts were seen up to 6 to 8 weeks postoperatively depending on the use of local medication.

On account of our center's occasional encounter with crust formation, we decided to try out the RF generator CURIS® with controlled energy application (Sutter Medizintechnik GmbH, Germany) in an effort to reduce the incidence of crusting. The high frequency of the CURIS® with its 4 MHz technique results in precise and localized effects and causes less damage to the surrounding tissue. It may be used with the same reusable bipolar electrodes as the BM-780 II, and is suitable for treatment of the inferior turbinates, the soft palate, and tongue base. It can be used for nose obstructions as well as breathing-related sleep disorders. The CURIS® with its controlled application and automatic stop mode makes the procedure safe and more reproducible. In the last few years we treated many patients with the RaVoR™ method for the

nose using the BM-780 II, and then we used the same method to treat patients with the CURIS® for the first time. We have treated two patients suffering from nose blockage due to inferior turbinate hypertrophy and previously unsatisfactory results through conservative treatment, using the RaVoR™ method for the nose and the CURIS®. The procedure

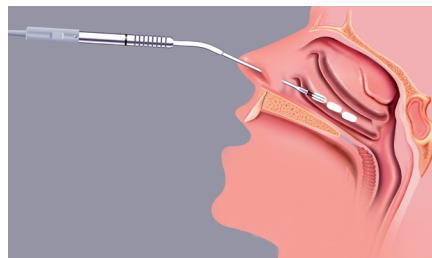


Fig. 2: Nasal turbinate puncture sites with schematic view of the inserted probe (REF 70 04 62) (Sutter, Germany)

was performed under local anesthesia as described above. The patients complained of no pain during or after treatment and they were observed for 45 minutes after the procedure. The procedure itself was the same as with the RF generator BM-780 II although timing was not necessary as it had been with the BM-780 II, and less visible tissue discoloration occurred. The patients were also treated with nose sprays and local ointments.

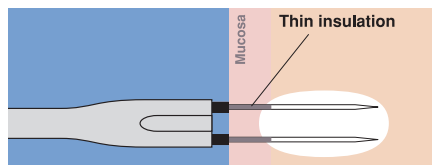


Fig. 3: Correctly placed RaVoR™ electrode. Complete insertion of the thin insulation protects the mucosa from surface lesions.

They were also seen postoperatively in the outpatient clinic. The results were excellent: No crust formation was visible, the swelling of the inferior turbinates was significantly reduced, and the patients were very happy with their nose breathing.



Fig. 4: CURIS® RF unit (Sutter, Germany)

Conclusion: Radiofrequency volume reduction is safe and effective for patients suffering from nasal obstruction due to inferior turbinate hypertrophy. The RF generator CURIS® offers even more advantages than the RF generator BM-780 II, and it minimizes crust formation. The CURIS® provides excellent volume reduction in a controlled way at minimal patient discomfort. The use of this generator can significantly reduce the number of turbinectomies under general anesthesia with combined bony and soft tissue resection while it produces comparable results (3-4). The generator is easy to use and suitable for an outpatient setting without the need for hospitalization of the patient.



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Featured Product

700462 – Bipolar needle electrode “Binner”

Qty.	REF	Description
1	700462	Bipolar needle electrode “Binner” with protective insulation, working length 110 mm



1:1



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

Qty.	REF	Description	Unit settings / Other accessories
1	360100-01	CURIS® radiofrequency generator (incl. main cord, user's manual and test protocol)	CURIS®
1	360110	Footswitch two pedals for CURIS® (cut & coag), 4 m cable	Bipolar electrode: Bipolar RaVoR
1	370154L	Bipolar cable for CURIS®, length 3 m	Power adjustment: 10 watts
1	360704	Monopolar handpiece (pencil) cut & coag, shaft 2.4 mm, cable 3 m	Optional: Rubber patient plate (REF: 360226)
1	360238	Cable for single use patient plates, length 3 m	
1 (x50)	360222	Safety patient plates, single use, packing 5 x 10 pcs. (not shown)	



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