SuperGliss® non-stick zhora bipolar forceps – fine-tip coagulation forceps for removal of a giant intraorbital cavernous hemangioma

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Fig. 1: SuperGliss® non-stick zhora bipolar forceps **(78 49 46 SGZ)**

Introduction: Cavernous hemangiomas are benign, low-pressure blood vessel malformations. Their growth is slow and occurs by hemorrhagic events. This entity is found along the entire central neural system, but cavernous hemangioma represents the most common benign intraorbital tumor in adults.
Because of the bony structures of the orbital cone, intraorbital cavernous hemangiomas push the ocular globe anteriorly when they grow. Consequently, symptomatic patients classically present proptosis or even visual disturbances in advanced cases. This situation requires surgery to decompress the eyeball with the goal of removing the cavernous hemangioma.
Different approaches exist to the intraconal, retrobulbar space. Depending on the position and size of the lesion, the surgeon will prepare a tailored approach. Moreover, orbital surgery requires very precise instruments to avoid injury to the ocular globe and its fragile surrounding structures (e.g. optic nerve, ophthalmic vessels, and ocular muscles). Here we report our experience with the SuperGliss® non-stick zhora bipolar forceps (Fig. 1) for intraorbital surgery.

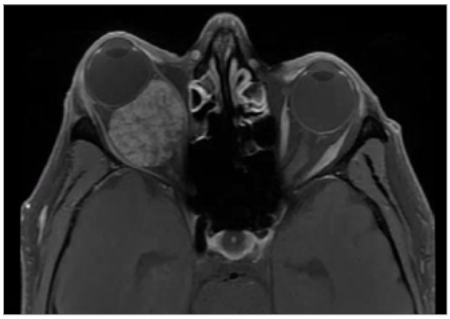

Fig. 2: Preoperative MRI of the orbital cavernous hemangioma

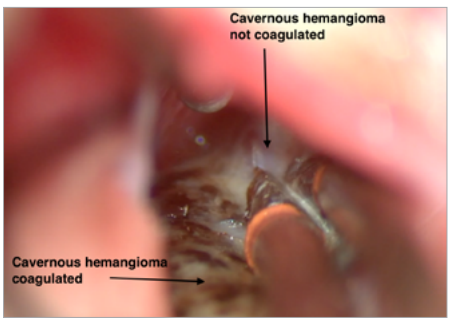

Fig. 3: Cavernous hemangioma coagulation

Surgical approach and technique: The patient was a 62 yo male presenting with progressive proptosis on the right eye. A cerebral MRI revealed the presence of a voluminous orbital lesion measuring 3 cm in diameter deemed to be a cavernous hemangioma (Fig. 2). Because of a medial intraconal location in contact with the eyeball, we chose to access the lesion by a medial trans-conjunctival approach.
The head was kept in a neutral prone position, fixed in a Doro head-clamp. After standard ocular disinfection and sterile draping, a self-retaining retractor was used to keep the eyelids open. Under microscopic magnification, a medial limbus incision was performed with two radial incisions allowing us to retract the conjunctiva nasally. The medial rectus muscle was then hooked, incised and separated from the ocular globe. The corridor to the posterior periorbital space was obtained at that moment with a slight lateralization of the eyeball. Normal intraorbital adipose tissues were dissected to reach the cavernous hemangioma.
To devascularize and shrink the tumor, we coagulated the lesion surface, taking care to avoid thermal damage to the surrounding tissue by using the fine-tip SuperGliss® non-stick zhora bipolar forceps (Fig. 3,4). The tumor volume was reduced step by step until extraction was feasible without pulling against the eyeball. We then extracted the tumor in one piece. After control of the hemostasis, the medial rectus muscle was reattached using a 6-0 Vicryl suture. Closure of the conjunctiva was done with 8-0 rapid Vicryl.

Results: The patient recovered rapidly after surgery. No postoperative complications were noted. The proptosis was reduced and the right eyeball went back to its physiological position. Postoperative control MRI confirmed complete removal. Pathology examination confirmed the suspected cavernous hemangioma.
The SuperGliss® non-stick zhora bipolar forceps was an important tool for this surgery. It allowed ultra-precise coagulation with its pointed, triangular-shaped tips. Furthermore, the 10° upward tilt aids visualization of the tips in deep and narrow surgical corridors. Bleeding from small vessels can easily be coagulated without damaging the surrounding tissues. This is of particular importance in the vicinity of the fragile optic nerve, the fine nerves to the eye muscles that control eye movement, as well as the ophthalmic artery and vein. Hemostasis of the conjunctiva can also be obtained securely. Lastly, because this surgery requires diminution of the cavernous hemangioma's volume by bipolar electrocoagulation, non-stick forceps are mandatory.

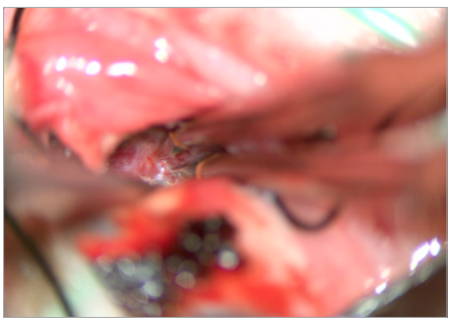

Fig. 4: Precision of the zhora tips on small vessels

Fig. 5: CURIS® 4 MHz radiofrequency generator

Conclusion: The SuperGliss® non-stick zhora bipolar forceps are a safe, precise and versatile tool for orbital surgery. We also support its use in skull base and vascular neurosurgery.

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Featured Products

Qty.	REF	Description
1	**78 49 46 SGZ**	**SuperGliss® non-stick zhora** bipolar forceps, bayonet, tips: 0.2 x 5.0 mm, total length: 15.5 cm, working length: 4.0 cm

[REF 87 00 10] CURIS® 4 MHz radiofrequency generator
basic set with single-use patient plates

Qty.	REF	Description
1	**36 01 00-01**	**CURIS®** 4 MHz radiofrequency generator (incl. mains cord, user manual and test protocol)
1	**36 01 10**	Foot switch two pedals for CURIS® (cut & coag), cable: 4 m
1	**37 01 54L**	Bipolar cable for CURIS®, length: 3 m (not shown)
1	**36 07 04**	Monopolar handpiece (pencil) cut & coag, shaft 2.4 mm, cable: 3 m (not shown)
1	**36 02 38**	Cable for single-use patient plates, length: 3 m (not shown)
1 (x50)	**12 80H**	Patient plates, single-use, 5 x 10 pcs. (not shown)

Unit settings / Other accessories*

CURIS®
4 MHz radiofrequency generator

SuperGliss® non-stick zhora: Bipolar Precise
Power adjustment: 4 to 10 watts

* Please consider that this information is not meant to serve as a detailed treatment guide. Always adjust according to patient and application.

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