Controlling Intraoperative and Postoperative Nasal Bleeding

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In rhinoplasty, intraoperative bleeding obscures the surgeon’s visualization, requires repetitive aspiration, and impairs achievement of the optimal surgical result. Hemorrhaging in patients postoperatively creates difficulty for recovery room personnel, necessitates surveillance of the airway, and may lead to other patient difficulties. Potential straining by the patient with coughing or vomiting increases both venous and arterial pressures and causes further nasal bleeding, and a vicious cycle can thus ensue (Fig. 1), leading to increased postoperative edema and ecchymosis.3,6,9

Review of the Literature

Historically, various methods have been proposed to prevent bleeding.5 These include variations in anesthesia technique, ranging from strict local anesthesia to general endotracheal anesthesia. Various preoperative medications, use of topical agents, variations in methods and formulas of injectable agents, as well as postoperative dressings and intranasal packings have all been proposed in an attempt to curtail or control intraoperative and postoperative nasal hemorrhage.1,2

The Solution

A commercially available device has been developed to reduce intraoperative and postoperative nasal bleeding. This device is an intranasal suction tampon composed of open-cell sponge material and silicone catheters that are connected to continuous suction (Fig. 2). The sponge member of the device is moistened for lubrication before insertion. An ideal lubricant is 4% cocaine solution, which also offers vasoconstriction and topical anesthesia. The tampon is inserted using a bayonet forceps (Fig. 3). The device is inserted intranasally to occupy the posterior aspect of the nasal cavity, allowing access to the vestibule for all surgical maneuvers (Fig. 4).

The suction catheters are attached to the patient’s cheek with adhesive strips and further

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Fig. 1. Cycle of bleeding, ingestion, and straining.

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connected to the source of suction by way of a self-contained adaptor. A universal Y connector also may be used so as to facilitate manual suction in conjunction with the continuous intranasal suction of the tampon (Fig. 5). A trap may be used for continuous collection and calibration of blood loss.

**DISCUSSION**

It is imperative that the sponge occupy an adequate intranasal space. If the sponge device is forcefully inserted into a compromised space, it may be compressed, inhibiting free flow of fluid through the open-cell network. Simple lateralization of the inferior turbinates will commonly suffice to form such an adequate intranasal space. Any severe septal deviation may require reduction prior to insertion of the indwelling nasal suction device.

In my experience, this device, which has been utilized in more than 200 cases, has been extremely beneficial in reducing surgical time by creating a safer intraoperative environment for the patient. Accordingly, this device affords superior visualization and facilitates the meticulous maneuvers required for optimal results in nasal surgery. In addition, patients often exhibit less edema and ecchymosis in the immediate postoperative period due to lack of straining. When allowed to remain in place during recovery, the tampon obviates the need for packing in many cases. This method results in less anxiety for the patient, since normal breathing may be resumed once hemostasis is achieved and the tampon is removed, and since the discomfort associated with extraction of nasal packing is eliminated. No significant risks have been encountered with this device.

**SUMMARY**

An indwelling nasal suction tampon is described that effectively controls both intraoperative and postoperative nasal hemorrhage. The
significant benefits of this device are better intraoperative control for the surgeon and less complicated postoperative recovery. I do not have any financial involvement in this device, but I would like other nasal surgeons to benefit from its particular advantages. The device is available under the trade name RhinoCath™ and may be obtained from Summit Medical, Inc. 815 Northwest Parkway, Suite 100, St. Paul, MN 55121; 1-888-229-2875.

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REFERENCES

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