

## Letters to the editor

### **Effect of infraorbital nerve block under general anesthesia on consumption of isoflurane and postoperative pain in endoscopic endonasal maxillary sinus surgery by Higashizawa and Koga**

**Hasan Yasan and Harun Doğru**

Modernevliler Mah. 142.cad, Çevreyolu Nurlu apt. D:17, Isparta, 32200, Turkey

*To the editor:* We have read with great interest the article entitled “Effect of infraorbital nerve block under general anesthesia on consumption of isoflurane and postoperative pain in endoscopic sinus surgery,” published in the 2001 issue of *J Anesth* (15:136–138) by Higashizawa et al. [1]. Although the study promises commendable benefits for endoscopic sinus surgery under general anesthesia, it unfortunately contains points that require clarification and statements that require reevaluation.

In the Materials and Methods section, the patients reportedly received 15 mg of pentazocine, which is an analgesic [2], on request; in the Results section, a contradictory statement is made that none of the patients required analgesics throughout the postoperative period. If some of the patients had been administered analgesics postoperatively, their numbers and the group to which they belonged should have been stated to ensure the reliability of the results.

In the Discussion section, endoscopic sinus surgery (ESS) was incorrectly stated to be done under regional anesthesia with some sedation only for the maxillary sinus area. ESS under regional anesthesia with some sedation can be performed not only for the maxillary sinus area but also for the frontoethmoidal recess, anterior and posterior ethmoid cells [3]. Additionally, general anesthesia combined with an appropriate regional block was incorrectly stated to be safer than regional anesthesia combined with heavy sedation for the manipulation of the ethmoidal region. ESS is most safely performed under regional anesthesia with sedation and is preferred for the following reasons. The patient is able to indicate to the surgeon when pain is increased, thereby providing additional anatomic guidance to the surgeon who is

manipulating the area near the orbit, skull base, and antero-posterior neurovascular structures. Should the patient develop an intraorbital bleed, the ability to examine the patient’s vision during the course of surgery also adds an additional level of safety, diminishing the risk to the patient of loss of visual acuity or diplopia. Moreover, it has been suggested that positive pressure ventilation and vasodilation associated with some general anesthetic agents can increase bleeding, greatering the potential for blood loss and resultant decreased visibility under general anesthesia. When these factors and the systemic complications of general anesthesia are considered, it can be clearly stated that regional anesthesia is safer than general anesthesia for ESS interventions [4–6].

In our opinion, if this study were carried out with the contributions of an otorhinolaryngologist, these inaccuracies would be avoided.

### **References**

1. Higashizawa T, Koga Y (2001) Effect of infraorbital nerve block under general anesthesia on consumption of isoflurane and postoperative pain in endoscopic endonasal maxillary sinus surgery. *J Anesth* 15:136–138
2. Reisine T, Pasternak G (1996) Opioid analgesics and antagonists. In: Hardman JG, Limbird LE, Molinoff PB, Ruddon RW, Gilman AG (eds) *Goodman & Gilman’s The pharmacological basis of therapeutics*, int. ed. McGraw-Hill, New York, pp 546–547
3. Keles N, Ilicali ÖC, Deger K (1998) Objective and subjective assessment of nasal obstruction in patients undergoing endoscopic sinus surgery. *Am J Rhinol* 12:307–309
4. Thaler ER, Gottschalk A, Samaranyake R, Lanza DC, Kennedy DW (1997) Anesthesia in endoscopic sinus surgery. *Am J Rhinol* 11:409–413
5. Jorissen M, Heulens H, Peters M, Feenstra L (1996) Functional endoscopic sinus surgery under local anesthesia: possibilities and limitations. *Acta Otorhinolaryngol Belg* 50:1–12
6. Fedok FG, Ferraro RE, Kingsley CP, Fornadley JA (2000) Operative times, postanesthesia recovery times, and complications during sinonasal surgery using general anesthesia and local anesthesia with sedation. *Otolaryngol Head Neck Surg* 122:560–566

*Address correspondence to:* H. Yasan

Received: May 29, 2002 / Accepted: July 24, 2002

---

**Effect of infraorbital nerve block under general anesthesia on consumption of isoflurane and postoperative pain in endoscopic endonasal maxillary sinus surgery by Higashizawa and Koga****Tomoaki Higashizawa**

Department of Anesthesia, Sakai Hospital in Research Institute of Basic-Clinical Medicine, Kinki University, 2-7-1 Harayama-dai, Sakai, Osaka 590-0132, Japan

*In reply:* I would like to thank Yasan and Doğru for their comments. Concerning the number of patients in the Results section, there were no patients who required additional analgesics postoperatively, even in a protocol in which the administration of additional rescue analgesics was planned (please see last sentence in Results).

It is very difficult to argue whether the better method for endoscopic sinus surgery is general anesthesia or local anesthesia. There are too many variations in surgical style; i.e., surgical concepts are diverse, surgeons' preferences are mul-

tiples, and surgical techniques change from case to case. The anesthetic side of surgery is similarly diverse. First, the standard technique of maxillary nerve block is not consistently safe and effective; it depends on the skill of the anesthesiologist who administers the nerve block. Second, local anesthesia combined with heavy sedation is close to general anesthesia. When sedation is heavy, a secured airway is safer than an unsupported airway. Third, finding of hemorrhage in an orbit under local anesthesia is a result of the surgery; the bleeding itself cannot be prevented by local anesthesia. In addition, sedation slows finding of hemorrhage.

The opinions written in the Discussion section of our article are based on the consensus of the surgical and anesthetic departments of our hospital. We do not contradict your direction toward local anesthesia and we can understand your opinion. However, a debate about the merits of general anesthesia versus local anesthesia is unproductive. It is not central to our thesis.

*Address correspondence to:* T. Higashizawa

Received: July 4, 2002 / Accepted: October 2, 2002