Anesthesia for In-Office Oculoplastic Surgery: How We Do It

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The effective use of local anesthesia combined with minimal oral sedation can obviate the need for intravenous sedation or general anesthesia in many common oculoplastic procedures. We routinely perform upper and lower blepharoplasty, fat pad repositioning, ptosis correction, tumor removal and reconstruction, and entropion and ectropion repair without the use of intravenous or general anesthesia.

We have implemented a system of local anesthesia administration that is nearly painless for the patient. We add oral sedation only for prolonged procedures to enhance patient comfort or to alleviate significant anxiety. When oral sedation is employed, we strive for minimal sedation. Our goal is an awake but relaxed patient.

Selection of Local Anesthesia

Local anesthesia involves topical agents for superficial conjunctival anesthesia combined with injectable agents for skin and soft tissue use. Occasionally, a topical skin anesthetic such as Betacaine (Medical Center Pharmacy, Tampa, FL) or lidocaine will be used as an adjuvant to injectable local anesthesia. The instillation of proparacaine 0.5% causes less discomfort than tetracaine 0.5%; therefore, it is the preferred agent for conjunctival anesthesia.1,2 The duration of action of proparacaine is limited to approximately 15 minutes; therefore, the surgeon must instill the agent as needed during the procedure.2

Lidocaine and bupivacaine serve all injectable anesthesia requirements. A low pH and rapid injection of the solution are associated with increased discomfort. Controlled slow infiltration and a neutral or nearly neutral solution is a simple technique that the surgeon can employ.3 Our preferred local anesthetic consists of a fresh mixture of the following: 50 mL lidocaine 2%, 5 mL sodium bicarbonate 8.4%, and 0.5 mL epinephrine 1:1000. The use of commercially available lidocaine 2% with epinephrine 1:100,000 is acceptable as long as the solution is neutralized. The addition of 8.4% sodium bicarbonate in a nine-part lidocaine and
one-part sodium bicarbonate mixture will effectively raise the pH of the solution into the neutral range. For prolonged local anesthetic effect, we favor bupivicaine 0.75% with epinephrine added at 1:100,000.

**Selection of Oral Sedative Agent**

The selection of an oral sedative agent is based primarily on surgeon familiarity with a given agent. We typically employ diazepam or occasionally lorazepam. The benzodiazepine sedative agent zolpidem is an acceptable alternative. Diazepam dosage ranges from 5 to 20 mg and lorazepam from 0.5 to 2 mg depending on age, weight, expressed anxiety, and previous experience with benzodiazepine medications. With zolpidem, we typically administer a 10-mg dose, although a 5-mg dose can be administered in selected patients. Flumazenil, a benzodiazepine reversal agent, is available. We rarely find it necessary to use narcotics for oculoplastic surgery. Apprehension and pain contribute to one another, so adequate preoperative counseling to decrease anxiety will make patients tolerate the procedure much better. A calm and reassuring manner from the surgeon and staff, as well as a sense of orderliness to the process, will help alleviate patient stress.

**Procedure**

1. Final preoperative counseling occurs, and questions are answered. The patient undergoes informed consent, and appropriate permission forms are signed before any oral agent is given. The patient is then administered a sedative agent, if one is to be employed. The recommended application time for the topical skin anesthetics ranges from 30 to 60 minutes so they should be applied promptly. Topical skin anesthetic can be applied by the nursing staff as soon as the patient arrives at the office.

2. Conjunctival anesthesia—one to two drops of proparacaine are instilled in the eye. For cutaneous topical anesthesia, Betacaine ointment may be applied to the sites of needle entry. Next, we perform preoperative surgical marking; once complete, the proparacaine will have achieved its effect. Next, a pledget is created by saturating a cotton-tipped swab with proparacaine. The pledget is placed in the inferior fornix for approximately 5 minutes. Before local anesthesia injection, the pledgets are removed. Using a dilute form of the fresh local anesthetic mixture and a 1.25-inch 27-gauge needle, the lower eyelid is anesthetized through a conjunctival approach. The dilute form of the anesthetic is prepared by combining 0.5 mL of the fresh anesthetic mix and 2.5 mL of sterile saline. We find that this very dilute form of local anesthetic is well tolerated and nearly painless. By injecting slowly through the area of pledget contact, most patients are completely unaware of this injection. If an upper eyelid procedure is also planned, the upper eyelids are anesthetized. The use of the 1.25-inch 27-gauge needle allows the entire upper eyelid to be anesthetized with two needle insertions. Approximately