

A TECHNIQUE OF PERIBULBAR ANESTHESIA ACCOMPANIED BY OCULAR COMPRESSION

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The technique for the use of peribulbar anesthesia for cataract surgery has been evolving for several years. Some ophthalmologists have tried it by modifying their usual retrobulbar techniques and have not been satisfied with the adequacy of the anesthesia.

Our results were not satisfactory when we first tried peribulbar anesthesia in 1984. The use of shorter needles increased our success. One and one half inch retrobulbar needles were used at first. One and one fourth inch and later one inch needles resulted in improved anesthesia. Greater improvement occurred with a change to 3/4 inch needles. The need of re-injection is unusual. There are reports of successful peribulbar anesthesia with 5/8 inch needles.

Using the following present technique the anesthetic is very satisfactory. Patients experience no pain or discomfort during administration of the anesthesia, during surgery and usually through the post operative period.

The peribulbar injections are made under very short acting intravenous Brevital anesthesia (usually 50 to 70 mg) administered by the anesthesiologist. Flatgrind (duck-bill) 3/4 inch needles by B.D. are our needles of choice at present. Four cubic centimeters of anesthetic agent are injected in the superior nasal area and the same amount also in the inferior temporal area. The needles are inserted peripheral to and angled slightly away from the globe. The Honan Intraocular Pressure Reducer is applied after tape is used to assure closure of the lids.

Duranest 1.5% with 1:2000,000 epinephrine and hyaluronidase 150 TRU added is the current anesthetic of choice. Duranest is a long lasting anesthetic. It usually provides comfort and prevents pain through the entire immediate post operative period. Sometimes ptosis and numbness persist until the day after surgery. In our experience the anesthesia lasts longer than the Xylocaine-Marcaine mixture. Extraocular compression following injection of the anesthesia serves two purposes. It facilitates spreading of the anesthetic agent in addition to creating a soft eye for safe intraocular surgery. A separate lid block is not needed.

Pneumatic extraocular pressure can be used at a pressure of 15 to 30mm Hg. It is usually used at 30mm Hg for approximately 20 minutes on the first case of the morning. Prior to the first surgery the second case can be injected and the pressure applied at 15mm Hg for 30 to 60 minutes or until time for surgery. To insure a soft eye during surgery it is important to leave the pressure device in place until just prior to the surgical prep. The surgery should be started shortly thereafter.

Rarely anesthesia is not complete and there is some extraocular muscle movement or sensation. Two approaches are available. Three more milliliters of the anesthetic can be injected in the inferior temporal peribulbar area plus two milliliters in the superior nasal region. The Honan Intraocular Pressure Reducer should be reapplied for at least five additional minutes to diffuse the anesthetic solution. A second and very satisfactory added anesthetic effect can be achieved by subconjunctival injection near the active intraocular muscle. We usually add the extra peribulbar injections.

Peribulbar anesthesia can be adequately administered by an anesthesiologist. Administration of the anesthesia by an anesthesiologist greatly facilitates smooth patient flow in the surgery suite.