Retrobulbar anesthesia is commonly administered before cataract surgery or other intraocular and intraorbital ophthalmic procedures. The main benefits of retrobulbar anesthesia include rapid onset of action, low volume required to achieve analgesia, and complete akinesia. Retrobulbar anesthesia has a very low risk for complications including ocular perforation, ptosis, persistent diplopia due to damage to adjacent extraocular muscles, retrobulbar hemorrhage, optic nerve injury, retinal vascular occlusion, and injection into the fluid compartments separating the meninges, which can rarely produce intracranial signs such as visual loss in the fellow eye or CNS symptoms. We describe a unique complication of an upper lid skin tear secondary to a retrobulbar block.

CASE REPORT

A 91-year-old woman was referred for cataract surgery. She had experienced a gradual bilateral reduction of vision that interfered with her reading and driving. Her ocular history was positive for bilateral posterior vitreous detachments, mild age-related macular degeneration, and blepharitis. Her general health was positive for hypertension, diabetes, asthma, peripheral neuropathy, and easy bruising.

Examination revealed a mild brow asymmetry and bilateral levator ptosis. The corrected distance visual acuity was reduced to 20/60 in the right eye and 20/50 in the left eye. The right lens showed nuclear sclerosis, and the left lens showed anterior cortical opacification. Mild retinal pigment epithelial changes were present in each macula.

The patient underwent cataract surgery with routine retrobulbar anesthesia in the right eye, and no complications were encountered. She attained an excellent visual result and requested cataract surgery in the left eye, which was scheduled 3 months later.

The anesthesiologist administered 3 mL of retrobulbar anesthesia using a mixture of 2% lidocaine hydrochloride (95%) and Vitrase (5%). The injection was given through the left lower lid while holding the upper lid open with his thumb. Immediately after the injection, a horizontal linear upper eyelid skin tear was noted, with the anterior lamella torn from the lash line, presumably by mechanical forces applied to the eyelid during the retrobulbar block (Figure 1, A). The surgeon consulted with one of the members of the oculoplastics team who recommended that he proceed with cataract surgery. Phacoemulsification with posterior chamber lens implantation was uneventful.

At the conclusion of the procedure, the oculoplastic surgeon confirmed that the upper eyelid skin had torn from the underlying muscle at the eyelash line. One milliliter of 1% xylocaine with epinephrine (1:100,000) was infiltrated into the eyelid, and a 7-0 Vicryl suture was passed in a running fashion to reapproximate the skin edges (Figure 1, B). Erythromycin antibiotic ointment was placed on the incision, and the patient was discharged.
The early postoperative course was uneventful, and the patient attained clear vision at 1 day postoperatively. At the 1-week follow-up visit, the oculoplastic surgeon removed the suture, and an excellent cosmetic result was noted (Figure 1, C).

DISCUSSION
The cataract surgeon was highly experienced and in his 40-year career had never encountered this complication of ophthalmic anesthesia. Moreover, a literature search failed to yield a similar case.

It is known that eyelid skin has the least total skin thickness of any location on the body. It is also known that as skin ages, the epidermis thins, and the dermis loses volume. This is due to a loss of proliferative capacity among epidermal keratinocytes and a reduction in hyaluronic acid in the dermis—consequently leading to a decrease in the amount of shear forces from friction that collagen in the skin can withstand. Together, these senescent changes make skin more susceptible to breaking from minor trauma in the elderly. Eyelid lacerations, avulsions, and skin tears are commonly caused by trauma, and it is likely that the patient’s attempt to squeeze the eyelid closed against the mechanical force of the thumb caused this unusual lid skin tear in an elderly patient.

REFERENCES

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