Inferior Rectus Muscle Restriction after Sub-Tenon's Anesthesia

Dear Editor,

Sub-Tenon's anesthesia (STA) is widely used for regional orbital anesthesia. Complications of STA are rare but include inferior rectus muscle restriction [1-3]. There have been no reports of inferior rectus restriction after STA in Korea. We encountered a patient with inferior rectus muscle restriction after STA who eventually required surgical treatment and report the case herein.

A 64-year-female visited our clinic in May 2013 for diplopia in the whole field of vision. She had undergone cataract surgery under local anesthesia using STA with 2% lidocaine without hyaluronidase at another clinic in March 2013 and complained of diplopia beginning in the immediate postoperative period. She had no systemic disease or preoperative history of diplopia or strabismus. She demonstrated 20 prism diopters hypotropia in the left eye in the primary position with limited elevation. Visual acuity was 20 / 20 in both eyes. Blood tests, including thyroid function tests and anti-acetylcholine receptor antibody, were within the normal ranges. No abnormal extraocular muscle findings were seen on orbital computed tomography. The diplopia increased to 30 prism diopters hypotropia in the left eye over five months postoperatively. Surgical treat-

Fig. 1. (A) Preoperative images of the subject in nine diagnostic positions of gaze, demonstrating hypotropia of the left eye in the primary position with limited elevation. (B) Three months postoperatively, hypotropia of the left eye had improved and the patient achieved binocular single vision.

ment was recommended, but the patient initially refused. As the clinical findings did not change during follow-up, surgery was performed in August 2014. Restriction of the inferior rectus muscle of the left eye was confirmed through the forced duction test. During surgery, conjunctival scarring over the inferior rectus muscle was noted, in addition to a linear scar along the medial border of the muscle. The inferior rectus muscle of the left eye was recessed by 5 mm and the superior rectus muscle of the right eye was recessed by 5 mm. The postoperative ocular alignment showed orthotropia, and the patient achieved binocular single vision (Fig. 1).

STA is becoming increasingly popular because it provides good analgesia without the passage of sharp needles in the orbit. The reported complications of STA include subconjunctival hemorrhage, chemosis, extraocular muscle paresis, and optic neuropathy [2,3]. Postoperative diplopia following cataract surgery under STA is particularly disconcerting for the surgeon. Jaycock et al reported three cases of persistent rectus muscle restriction after STA [4]. They postulated that direct trauma to the muscle with hematoma formation occurred at the time of the STA with subsequent contracture of the affected muscle. We agree with their hypothesis based on our surgical findings. Although inferior rectus muscle restriction after STA is uncommon, the surgeon needs to be aware of this possibility; care must always be taken to avoid direct trauma to the muscle during the procedure.

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Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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Massive Exudative Retinal Detachment Following Photodynamic Therapy and Intravitreal Bevacizumab Injection in Retinal Capillary Hemangioma

Dear Editor,

Retinal capillary hemangioma (RCH) is a benign capillary angiomatous hamartoma that occurs on the peripheral or juxtapapillary retina. The condition in which

RCH is accompanied by intracranial hemangioblastomas and cysts in abdominal organs such as kidneys or pancreas is termed von Hippel-Lindau (VHL) disease. Photodynamic therapy (PDT) with anti-vascular endothelial growth factor agents is an effective treatment for RCH [1], although exudative complications can occur following PDT in rare cases [2-4]. Herein, we present a case of massive exudative retinal detachment involving the entire retina following the administration of PDT with intravitreal injection of bevacizumab in a patient with VHL disease.

A 24-year-old man was referred to our hospital with a history of impaired vision in his left eye. On admission, his visual acuity was 20 / 100 in the left eye, and his