Horizontal Diplopia Following Upper Blepharoplasty

Tomás Ortiz-Basso Rodolfo Vigo Eduardo Jorge Prémoli

Department of Oculoplastics, Orbit, and Lacrimal Ducts, Hospital Italiano, Buenos Aires, Argentina

Key Words

Blepharoplasty · Diplopia · Muscular paralysis · Strabismus

Abstract

Diplopia is an infrequent complication after blepharoplasty. Most of the cases are in its vertical form due to trauma of the extraocular muscles. In this article, we present a case of horizontal diplopia following cosmetic upper blepharoplasty; we review the literature on this unexpected complication and offer some recommendations to avoid it. © 2014 S. Karger AG, Basel

Introduction

Blepharoplasty is one of the most frequent eyelid surgeries. It is performed for functional or cosmetic reasons, which is why the ophthalmologist has to be trained to satisfy the patients' needs, as well as manage any possible complications, because even when the surgeon may have plenty of experience, complications may arise. Some of the most frequent complications are lagophthalmos and cicatricial ectropion, a product of the shortening of the anterior lamella. Another complication, infrequent but severe, is retrobulbar hemorrhage, which requires immediate treatment. Besides, the wound may become infected and there may be asymmetry, palpebral ptosis and, among other less frequent complications, diplopia [1, 2]. For this last one, we revised the literature and made a new presentation.

Material and Methods

Procedures followed the tenets of the Declaration of Helsinki.

Tomás Ortiz-Basso, MD
Bolivia 630, CP (L6300GDD)
Santa Rosa (Argentina)
E-Mail tomasortizbasso@gmail.com

A 61-year-old female, type A personality, consulted us for eyelid surgery. Her medical records included allergies to aspirin and dyslipidemia. She had no history of thyroid disease, myasthenia, diabetes or strabismus. Her ophthalmic exam showed no variations.

We performed bilateral upper blepharoplasty without surgical complications. After 24 h, the patient was consulted for horizontal diplopia. In her ophthalmic exam, she presented a visual acuity of 10/10 in both eyes and an intraocular pressure of 10 mm Hg. Biomicroscopy and ocular fundus presented no variations. In the external exam, we observed a slight palpebral edema, a product of her surgery. A cover test presented ET6 in the primary position, ET6 in the supraversion, ET8 in the infraversion, ET14 VD+2 in the levoversion and orthotropia in the dextroversion, linked to paresis of the right VI nerve (fig. 1). Erythrocyte sedimentation was 15 mm and C-reactive protein level was 0.6 mg/l. We performed brain and orbit MRIs, which showed no variations. Diplopia lasted for 3 months, and then restitutio ad integrum occurred.

Discussion

The frequency of diplopia after blepharoplasty is unknown. However, taking the large amount of blepharoplasties performed and the small amount of diplopia cases reported into account, we estimate that the frequency is very low.

Even though there are cases of horizontal diplopia [3], most of the literature describes vertical and torsional diplopia. Within the last one, there are 2 patterns: superior oblique muscle dysfunction, which is associated to upper blepharoplasty, and inferior rectus/oblique rectus dysfunction associated to lower blepharoplasty. The first one may be due to a lesion in the trochlea, caused by Brown syndrome or a traumatic lesion of the superior oblique muscle, caused by hematoma or anesthesia toxicity [4–9]. In the second pattern, a lesion can occur in the inferior rectus muscle or in the inferior oblique muscle. Part of the route of the inferior oblique muscle goes between the internal and medial fat pad and it is necessary to identify it during surgical dissection to avoid causing a lesion. However, the muscle is robust, and some lesions are compensated and subclinical [4–9].

This is a case of diplopia of unknown origin. We believe it is a microvascular etiology. Although microvascular mononeuropathy of the VI cranial nerve is already known, we cannot confirm the diagnosis because the patient's only risk factors were dyslipidemia and type A personality. In our experience, it is the second case of diplopia following blepharoplasty in more than 5,000 surgeries. The other case was due to a lesion in the inferior oblique muscle.

In this article, we want to highlight the importance of very well knowing the anatomy in order to perform a careful dissection, using as little cauterization as possible.

We insist on strengthening the doctor-patient relationship. We believe that when we assist the patient with empathy and devotion, we get better results.

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Fig. 1. Patient with paresis of the right VI nerve, 1 week after upper blepharoplasty surgery.