Combined Surgical Approach for Orbital Stability in an Anophthalmic Eye with an Ocular Prosthesis

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Introduction

Lower lid laxity that occurs in involutional ectropion results from horizontal eyelid laxity due to the effects of gravity. The integrity of the medial and lateral canthal tendons, muscle dynamics and tone, play a large role in lower eyelid position. Patients with lower eyelid laxity may complain of dryness, tearing, burning, itching, or foreign body sensation, all of which are common to the practice of a general ophthalmologist. Patients that use an ocular prosthesis are more prone to lower eyelid abnormalities, increased meibomian gland dysfunction and associated ocular symptoms. The changes in the eyelids may become severe enough that the prosthesis becomes unstable and difficult to use. A surgical approach may be necessary to alleviate symptoms and correctly position the ocular prosthesis. Though various surgical techniques have been described to correct lower lid laxity, no consensus has been reached on which technique is best or preferred. This case presents a unique combined surgical approach to achieve long term results and greater cosmesis.

Case Description

72 year old female with a left orbital prosthesis complained of the prosthesis falling out intermittently. She also complained of itching and dryness at all times of the day that interfered with her daily activities. The patient was treated medically over the course of a year and her symptoms became progressively worse, causing her to seek more invasive treatment.

On exam, the right eye had an acuity of 20/20 at distance without correction, IOP 13 mmHg, 1 mm nasal pterygium, +SPK. Snap test of 10 seconds, and a Distraction test of 8 mm. The left orbit had a prosthesis in place, a +SPK, Snap test of 10 seconds, and Distraction test of 8 mm OU.

External photograph demonstrating involutional ectropion OU and an ocular prosthesis OS. External photograph with lower eyelid distraction measuring 8 mm OU.

External photograph taken 9 months postoperatively demonstrating correction of lower eyelid laxity and greater prosthetic support.

Conclusion & Implications

Currently there is no consensus as to the best surgical approach for resolving lower eyelid laxity associated with an ocular prosthesis. Ectropion repair by lateral tarsal strip or wedge resection, have been described as possible techniques to correct horizontal lid laxity but they may not be sufficient to both correct lower lid laxity and support an ocular prosthesis with long term results. 7,14,19

In this combined surgical approach the ectropion repair using a lateral tarsal strip tightens the lower eyelid, correcting the lagophthalmos. The orbicularis suspension elevates the lower eyelid position to a more natural and anatomically appropriate position.14 It also provides an extra degree of support for the weakened orbital septum,14,21 prevents postoperative eyelid malposition, and reduces tension on the tarsus repair. Thus it provides support to maintain the prosthesis in anatomic position and restores symmetry of the eyelids. This unique combined surgical approach provides for better long term results, greater cosmesis, and higher patient satisfaction.

References