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Severe eyelid entropion after ptosis correction surgery

Entrópio palpebral severo pós cirurgia de correção de ptose

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Abstract

Sixty-nine (69) year old patient with severe upper eyelid entropion following surgical correction of ptosis through levator muscle aponeurosis advancement and reinsertion. The aponeurosis advancement appeared to be much lower than typically intended, and surgical repair was performed via aponeurosis re-fixation into the superior 1/3 of the tarsal plate, with subsequent improvement in the aesthetic and functional outcome, and a satisfied patient. Due to the inferiorly located tarsal sutures, the tarsal plate acquires a U-shape due to a central fold and an inferior rotation of its upper half, resulting in entropion formation. This case highlights the importance of taking great care when advancing the levator muscle in ptosis due to levator aponeurosis dehiscence, particularly in elderly patients, so as to avoid vertically folding the superior tarsal plate.

Keywords: *Entropion/etiology; Blepharoptosis/surgery; Blepharoptosis/ complications*

Resumo

Paciente de 69 anos evoluiu com entrópio palpebral severo após cirurgia de correção de ptose palpebral pela técnica de reinserção da aponeurose do músculo levantador da pálpebra superior. Realizada reintervenção onde foi diagnosticado uma fixação da aponeurose em uma posição muito inferior e feita uma refixacação no 1/3 superior do tarso, com melhora do quadro funcional e estético com boa satisfação da paciente. Devido às suturas em topografia mais inferior, o tarso adquire forma de U em decorrência do dobramento no centro da placa tarsal e da rotação inferior da sua metade superior resultando no entrópio. Este caso ressalta a importância do cuidado quanto a localização da inserção da aponeurose do MLPS, principalmente nos paciente idosos, como forma de evitar o encurvamento vertical do tarso.

Descritores: Entrópio/etiologia; Blefaroptose /cirurgia; Blefaroptose/ complicações

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Introduction

Involutional eyelid ptosis is the most common cause of acquired ptosis. Its frequency was reported as being 39.1% in Brazilians over 50 years.[1] The surgical correction of this problem is currently required, and its careful evaluation should be done in order to avoid complications. When they occur, complications are usually mild and transient, such as bruising and edema. However, they can sometimes be more severe, such as corneal and astigmatic alterations, and require new surgical approaches for correction, such as eyelid retraction, ectropion, and more rarely entropion.

The present report aims to describe a case of entropion correction after upper blepharoplasty surgery, and its possible mechanisms of action.

Case Report

A 69-year-old female patient with a history of "droopy eyelids" in the right eye (RE) greater than in the left eye (LE) for 15 years. Visual acuity (VA) with best correction of 20/40 in the RE and 20/20 in the LE. In ectoscopy, palpebral ptosis was observed in both eyes (RE > LE). Pupil margin reflex distance (MRD): -03mm in the RE and +01mm in the LE; Function of UELM: 10mm in the RE and 14mm in the LE; versions: normal in both eyes (BE); Bell Sign: good in BE. The diagnostic hypothesis was severe palpebral ptosis in the RE, and moderate palpebral ptosis in the LE (Figure 1), and the decision was to perform resection of upper eyelid levator muscle (UELM) in BE. The upper palpebral sulcus incision, septal opening and UELM dissection were performed, resection of the muscle with consequent reinsertion of the muscle in the tarsus in three points: pupillary midline, temporal and nasal with silk 6-0. Cutaneous single cut stitches were performed with nylon 6-0, with three of these stitches encompassing the UELM for redoing the eyelid fold. After 15 days, the cutaneous stiches were removed, and 2 days afterwards it evolved to severe entropion on the right, where the margin of the upper eyelid was totally inverted and difficult to reduce, and it was impossible to maintain therapeutic contact lens on the cornea (Figures 2 and 3). The patient then underwent a procedure to reopen the surgical wound in order to diagnose the cause of the entropion and its consequent correction. What happened during the procedure was that the aponeurosis of the eyelid levator muscle was well reinserted. However, the sutures were very close to the lower border of the tarsus on the anterior face. A reinsertion of the aponeurosis was carried out in an upper topography at the upper 1/3 level of the tarsus. The patient showed improvement of the entropy, with progressive regression in the postoperative period (3 months), and improvement of ptosis with MRD of + 4 mm (Figure 4).

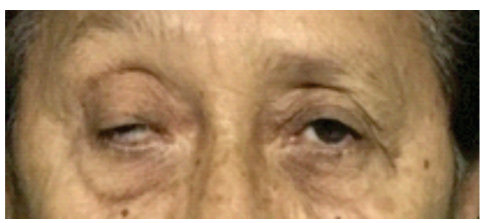

Figure 1: Preoperative

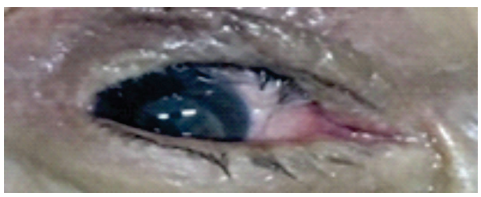

Figure 2: Post operative entropion

Figure 3: Post operative entropion

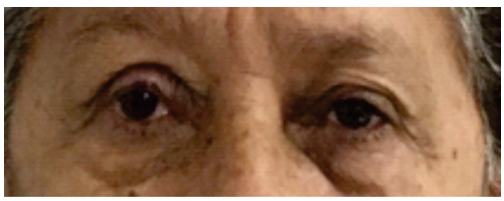

Figure 4: Post-operative after entropion correction

Discussion

Involutional eyelid ptosis is caused by deinsertion or dehiscence of the muscle-aponeurosis complex of the tarsal plaque, and characterized by the high or absent palpebral sulcus, thinning of the upper eyelid, and normal function of the UELM.[2] The tendon fixation technique is widely described by Jones et al., and is one of the most used ones for senile ptosis. [3] Regardless of the surgical technique employed, there is possibility of complications inherent to the procedure, despite being well executed, such as hypercorrection, residual ptosis, cornea with exposure keratitis, ectropion, incorrect eyelid height, abnormal eyelid contour, asymmetrical skin wrinkles, and less frequently cystic lesions, astigmatism alteration, and entropion. [4,5]

Although entropion after ptosis repair surgery is rare, it should be promptly corrected to avoid other complications such as corneal injury.

Some reports in the literature suggest that care should be taken during the surgical procedure, since they suggest that the causal factor for entropion is the insertion of the aponeurosis in the lower part of the middle third (of the anterior face) of the tarsus. Due to the sutures in lower topography, the tarsus takes on a U-shape as a result of folding in the center of the tarsal plate and the inferior rotation of its upper half, resulting in entropion. In the elderly, because the tarsus is thinner and worn out, it becomes a facilitating factor for this complication.

The analysis of vector force suggests that the insertion at the lower part of the aponeurosis during ptosis surgery should result in the development of ectropion rather than entropion. However,

significant wear of the tarsus may cause the resulting vector forces to act as agonists for the pre-tarsal orbicularis, causing inversion of the tarsus and development of entropion.

In order to avoid postoperative entropion, aponeurosis should be reinserted in the upper third of the tarsus, 2 mm below its upper margin, followed by division of the gray line with repositioning of the anterior lamella to reduce the bending exerted on the tarsal plate by the aponeurosis and minimize the risk of postoperative entropion, thus restoring the anatomical position of the eyelid. [6,7]

The present case emphasizes the importance of care for the location of the insertion of the UELM aponeurosis, especially in the elderly patients, as a way to avoid vertical bending of the tarsus.

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