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Case Report

Folding of Levator Palpebrae Superioris Muscle to Correct Blepharoptosis Caused by Overuse of Eyes in Young People: A Case Report

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ARTICLE INFO

Article history:

Received: 12 July, 2021

Accepted: 26 July, 2021

Published: 16 August, 2021

Keywords:

Secondary ptosis

aponeurosis of upper eyelid

ABSTRACT

Young people are more and more likely to suffer from conjunctivitis because of the increasing use of electronic products. After conjunctivitis is cured, there will be secondary ptosis which will be corrected by surgery. During the operation, we found that the aponeurosis of upper eyelid has become weak and partially ruptured, so we used, folding to repair the aponeurosis of upper eyelid to achieve better treatment effect.

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Introduction

Acquired blepharoptosis is more common in the elderly, and it is complicated by the relaxation of the upper eyelid skin caused by aging. Young blepharoptosis is mostly caused by congenital or disease. However, with the abundance of modern electronic products, the number of young acquired aponeurosis blepharoptosis caused by improper use of eyes is increasing day by day. For these kind of patients, we use surgical methods to treat them. The report is as follows.

Case Presentation

A young male patient, 21-year-old, medium and thin, BMI 18, denied the wearing history of contact lenses (Figure 1). He complained that conjunctivitis appeared after playing video games for more than 13 hours. His vision was 0.3 in the left eye and 0.8 in the right eye. After 1 week of conjunctivitis treatment by ophthalmology, his vision recovered to 1 in the left eye and 1 in the right eye. After that, ptosis appeared. Conservative treatment still not improved. Diagnosis and physical examination: the reflective distance between the upper eyelid margin and the cornea center was 1.5 mm in the right eye, 2.0 mm in the left eye, the muscle strength of levator palpebrae was ≥ 8 mm (Figure 2), the Müller's

muscle was positive for neofortin test, and no obvious prolapse of lacrimal gland was found in the preoperative examination.



Figure 1: Before the patient's illness, no obvious ptosis was found.



Figure 2: Before the operation, the blepharoptosis of the patient was 1.5 mm from the upper eyelid margin to the corneal center, 2.0 mm from the left eye, and the muscle strength of levator palpebrae superioris ≥ 8 mm.

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The patient underwent conventional blepharoplasty, local infiltration anaesthesia with 1% lidocaine and 1/100000 adrenaline, incision of skin and subcutaneous tissue, separation of orbicularis oculi muscle, opening of orbital septum, thinning of the levator aponeurosis, partial disconnection with the meibomian plate, the split part in the meibomian 1/3, about 1.5 cm long (Figure 3). There was no obvious prolapse of the lacrimal gland and fat hernia of the orbital septum. In the split part, 6-0 nylon thread mattress was used to repair the defect, and the aponeurosis of the upper eyelid was shortened and moved forward to 4mm. The fold made the aponeurosis membrane form a double layer aponeurosis structure, strengthened the aponeurosis force, fixed it and sutured the 1mm below the upper edge of the tarsal plate, then adjusted the height and radian to meet the patient's requirements. During the operation, 6 mm. 7-0 nylon suture was used to suture the skin intermittently. After 24 hours of pressure bandaging, the suture was removed 6 days after the operation. The follow-up of WeChat for one month showed that there was no eyelid deformity or exposed keratitis, and the effect was satisfactory (Figure 4).



Figure 3: During the operation, the meibomian end of levator aponeurosis became thin, part of it was severed from meibomian, and the split part was located in 1/3 of meibomian, about 1.5 cm long. The obvious prolapse of lacrimal gland and fat hernia of orbital septum were seen.

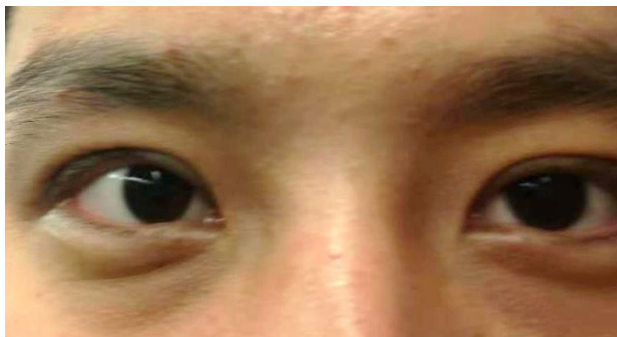


Figure 4: One month after the operation, WeChat follow-up showed that there was no eyelid deformity and exposed keratitis, and the effect was satisfactory.

Young people's acquired aponeurosis ptosis belongs to a type of ptosis; the common reasons are as follows: i) Frequent wearing of corneal contact lens can easily lead to the injury of aponeurosis of the levator palpebrae superioris muscle and cause ptosis. ii) Blepharochalasia may also occur in young people. The main manifestation of blepharoptosis is the recurrent painless upper eyelid edema. Lacrimal glands prolapse and fat hernia may occur. The pathogenesis of blepharoptosis is directly related to the tendinous expansion caused by the repeated eyelid edema.

iii) Blepharoptosis, which is common in male patients with severe obesity, is characterized by chronic progressive flaccid upper eyelid and chronic papillary conjunctivitis. The conjunctival surface of the upper eyelid is extremely loose, while the skin surface is relatively normal [1].

With the popularization of electronic products, the single-use time in young people is greatly prolonged. In eye diseases, it is necessary to strengthen the importance of popular science and eye hygiene. Long-term tired use of eyes will not only damage vision, but also cause an irreversible impact on eye morphology [2]. This patient was caused by a single long-term video game, which may be a mechanical injury caused by excessive single use of the eye. It can be seen that the aponeurosis of the levator palpebrae superioris has thinned anatomically, which suggests that long-term fatigue of the eye may also cause irreversible damage to the extraocular soft tissue.

Because the reason for aponeurosis blepharoptosis is the rupture or defect of aponeurosis, we often choose to separate and repair the aponeurosis of the levator palpebrae superioris, and we can directly observe the position of the upper eyelid or the curvature and height of the palpebral margin during the operation [3]. The levator aponeurosis of the upper eyelid can be shortened and moved forward, so that the levator aponeurosis can form a double-layer structure, the weak aponeurosis can be overlapped and strengthened, and the Müller muscle and levator palpebrae superioris can be preserved. The inner and outer corners of the eyelids maintain the normal structure of the eyelids.

Conclusion

The operation is simple, the injury scope is small, the postoperative response is light, and the effect is good. Although the operation has been used in the elderly patients with ptosis, it is also suitable for the patients with weak aponeurosis of levator palpebrae.

Acknowledgment

We are grateful to Dr. Sun Jiachen for helpful discussion and advice for this article.

Conflicts of Interest

None.

Funding

None.

REFERENCES

- Finsterer J (2003) Ptosis: causes, presentation, and management. *Aesthetic Plast Surg* 27: 193-204. [[Crossref](#)]
- Akkaya S, Atakan T, Acikalin B, Aksoy S, Ozkurt Y (2018) Effects of long-term computer use on eye dryness. *North Clin Istanbul* 5: 319-322. [[Crossref](#)]
- Liu CY, Chhadva P, Setabutr P (2018) Blepharoptosis repair. *Curr Opin Otolaryngol Head Neck Surg* 26: 221-226. [[Crossref](#)]