Case report
Bedside repair of congenital upper eyelid entropion: A variation of the Quickert suture technique

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1. Introduction

The current literature is void of any lasting bedside treatments for congenital upper eyelid entropion repair.

2. Case report

A six-day old male was examined for ophthalmic anomalies associated with duplication of the long arm of chromosome 3q11.1-q24 (partial trisomy 3q). Other systemic findings included bilateral cleft lip palate, polymicrogyria, pyloric stenosis, and seizures. On ophthalmic examination, he had severe bilateral upper eyelid entropion (Fig. 1). The corneal epithelium was intact and without fluorescein staining. There was no lagophthalmos or eyelid retraction. No other congenital ocular anomalies were noted in the anterior or posterior segment.

Ocular lubrication every two hours was ordered, and the patient was examined weekly in hopes of spontaneous improvement of the entropion. However, examination after six weeks revealed unresolved bilateral upper eyelid entropion with early corneal decompensation, including diffuse punctate epithelial erosions. The patient was almost ready for discharge to home, and there was concern regarding poor compliance with lubricating gel. In addition, despite constant lubrication by our nursing staff, the ocular surface was not improving. Based on these factors, the entropion was repaired in the neonatal intensive care unit before discharge.

A variation of the Quickert suture technique was used to repair the upper eyelid entropion (Fig. 2). The procedure was done under NICU staff monitored sedation with local anesthetic, consisting of one CC of lidocaine 1% with epinephrine 1:100,000 into each upper eyelid. Each needle of a double armed 6-0 Vicryl (polyglactin 910) was passed as high as possible into the superior fornix palpebral conjunctiva, and then turned anteriorly and inferiorly, to pass full thickness through the upper lid, exiting just above the cilia. The suture arms were tied without a bolster. This was repeated nasally to the first central suture. There were no complications, and the patient was discharged on topical ophthalmic bacitracin ointment for one week. This successfully everted both of the upper eyelids, with sustained and complete resolution after 6 months (Fig. 3). A video describing this technique can be found online (Video 1).

Supplementary video related to this article can be found at http://dx.doi.org/10.1016/j.ajoc.2016.08.006.

3. Discussion

Quickert procedures, traditionally placed on the lower eye lid for involutional entropion, are placed with a double armed 6-0 Vicryl...
(polyglactin 910) suture and starting deep in the fornix on the palpebral conjunctiva, securing the lower eyelid retractors in the initial pass through the eyelid while directing the needle superiorly toward the eyelid margin. The suture comes through the skin near the margin, the second needle is passed in the same fashion and they are tied on the surface of the skin, therefore evertting the lower eyelid. We used a variation of this technique in the upper eyelid with three sutures placed along the upper lid margin.

A literature review in Pubmed for congenital entropion yielded few articles discussing entropion in children, and no articles about upper eyelid entropion in conjunction with duplication of the long arm of chromosome 3q11.1-q24. Luchs et al., suggested that all entropion cases in upper or lower lids should be repaired as they will not spontaneously improve. Three articles referenced using the Quickert procedure to repair entropion in children but all with regard to the lower eyelid. Serrafino et al. reported a series of successful lower lid congenital entropion repair utilizing a rotational suture technique similar to ours, as well as incisional technique. Bosniak reported a case of congenital upper lid entropion associated with a tarsal kink. His technique involved a rotational suture that entered the upper eyelid conjunctiva near the base of the lid, then carried the sutures through the tarsus and emerged through the skin superiorly (the opposite direction of our sutures). The Quickert has not been performed on a patient with a tarsal kink in the literature, and it remains unknown if it would work for this condition. Other techniques including a “fish-tail” excision of skin has been used to treat lower eyelid entropion with good outcomes, but surgically more difficult with a large incision.

4. Conclusions

Our approach is minimally invasive and offers equally good results. We believe placing the sutures high in the fornix is likely more comfortable and less likely to rub on the corneal epithelium. After our search of the literature utilizing Pubmed, this variation on the Quickert procedure, utilized in the upper eyelid congenital entropion, has never been reported. Additionally, upper eyelid entropion has also never been mentioned in conjunction with duplication of the long arm of chromosome 3q11.1-q24. The Quickert technique should be considered in these unusual cases. It is minimally invasive and can be done under local with monitored sedation in young children, and although typically this suture technique may not lead to lasting results, it our patient the success has been long lasting.

Patient consent

Written consent to publish the photographs included in the report was obtained from the family of the child.

Acknowledgments

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