Case Report

ACQUIRED CONJUNCTIVAL INCLUSION CYST FOLLOWING MULTIPLE EYELID SURGERIES POST TRAUMA

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ABSTRACT

This report highlighted that multiple surgery on the eyelid can lead to an acquired conjunctiva inclusion cyst. A 6-year-old healthy boy was referred to the oculoplastic department with a complaint of swelling over the right upper eyelid and cosmetic concerns following multiple complicated surgeries to the right upper eyelid. Under the oculoplastic team, a right eye ptosis repair with resuturing of the upper eyelid was done under general anesthesia. Intraoperatively, a conjunctival inclusion cyst measuring 1.5mm was excised subcutaneously with an intact capsule in the medial segment of the upper eyelid. Postoperatively, he still had ptosis with highbrow position and frontalis over action. However, his visual acuity improved from 6/9 to 6/6 on the right eye following a mild resolution of ptosis. Through this report, it is concluded that the complications of conjunctiva cyst following eyelid repair can be avoided with proper surgical technique during the primary repair.

INTRODUCTION

Conjunctival inclusion cysts are slow-growing, benign lesions that can be congenital or acquired due to surgery or trauma. These cysts are filled with serous fluid containing shed cells and mucin. Inclusion cysts are classified as primary or secondary, depending on their causes [1]. We report a case of an acquired conjunctival inclusion cyst following multiple eyelid surgeries.

CASE REPORT

A 6-year-old healthy boy was referred to the oculoplastic department with a complaint of swelling over the right upper eyelid and cosmetic concerns following multiple complicated surgeries to the right upper eyelid. One month prior, he sustained a traumatic laceration to the right upper eyelid after getting pierced by a metal hook attached to a cradle and visual acuity on the right eye was 6/10.

He first underwent right upper eyelid toilet and suturing under general anesthesia on post-trauma day one, followed by refashioning of the upper eyelid on day three. Subsequently, he developed a cicatricial ectropion with granuloma and underwent a third surgery for excision and refashioning of the upper lid again. Unfortunately, his wound healed poorly with dense scar tissue, mechanical ptosis and irregular lamellar surface (Figure 1).

Under the oculoplastic team, a right eye ptosis repair with resuturing of the upper eyelid was done under anesthesia (Figure 2). Intraoperatively, a conjunctival inclusion cyst measuring 15 x 10 mm was excised subcutaneously with an intact capsule in the medial segment of the upper eyelid (Figure 3). Mini-monoka was used to intubate the lacerated upper punctum and canaliculi. Histopathology of the cyst was sent however was lost due to a technical glitch.

Postoperatively, he still had ptosis with highbrow position and frontalis over action (Figure 4). However, his visual acuity improved from 6/9 to 6/6 on the right eye following a mild resolution of ptosis.

DISCUSSION

Inclusion cysts are classified as primary or secondary, depending on their causes. The primary inclusion cyst is generally restricted to the superomedial side of the orbit and is congenitally developed during the embryonal period by the separation of a portion of conjunctival epithelial cells. The secondary type of inclusion cyst is more

Figure 1: Right eye mechanical ptosis with dense scarring (blue arrow)

Figure 2: Right eye resuturing of eyelid revealed conjunctival inclusion cyst.

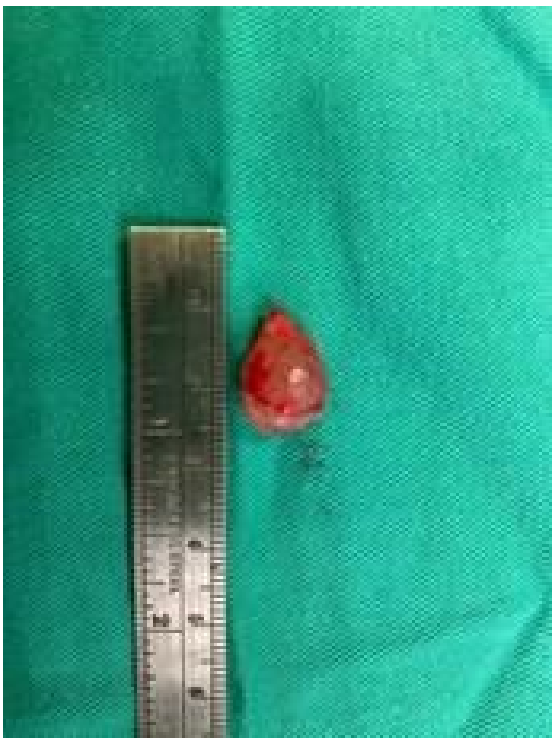

Figure 3: Macroscopic appearance of the conjunctival inclusion cyst measuring 15x10 mm,thin walled and firm consistency filled with serous fluid.

Figure 4: Post operative day 2. Swollen eye-lids with intact sutures and highbrow position.

prevalent than the primary cyst [2]. It is an acquired type of cyst and is located primarily in the superolateral side of the orbit. It occurs naturally or under inflammatory conditions of the conjunctiva, and it may be developed by amalgamation of mucosal folds. In most cases, it is developed by detachment of a portion of the conjunctival epithelium by surgery or trauma and its following implantation onto the conjunctival epithelium.

The histopathologic section usually reveals conjunctival cyst lined with nonkeratinizing stratified

epithelium filled with Periodic Acid Schiff (PAS) positive ingredients with no inflammatory cells in the vicinity [3].

In this case, the amalgamation and implantation of conjunctival epithelium into the eyelids following multiple eyelid surgeries are therefore responsible for the occurrence of an inclusion cyst within the eyelid structure. In addition, histamine, eosinophil, major basic protein, prostaglandin F, cytokines and other characteristic inflammatory mediators of post traumatic reactions may cause the development of inclusion cysts by inducing a certain toxic reaction [4,5]. However, this is difficult to confirm, as immunological examinations and biopsy of the inclusion cysts was not performed in this case.

CONCLUSION

The complications of conjunctiva cyst following eyelid repair can be avoided with proper surgical technique during the primary repair. This can be achieved with good knowledge of eyelid anatomy thus minimizing complications and reducing the need for multiple surgeries.

ETHICAL CONSIDERATION

This study has been conducted in accordance to the Declaration of Helsinki and an informed consent form has been obtained from the patients' parent.

CONFLICT OF INTEREST

All authors declare no conflict of interest.

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