

Irksome Preseptal Cellulitis Following Squint Surgery- A Case Report

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Abstract

Inflammation of the soft tissues anterior to the orbital septum is termed periorbital cellulitis or pre-septal cellulitis and affects the eyelids and adnexa. Periorbital infections are infrequent but potentially sight threatening complications of strabismus surgery, hence need to be diagnosed and treated at the earliest. Here We report a case of 33 years female who presented with persisting preseptal cellulitis following strabismus surgery due to hypersensitivity reaction to vicryl sutures.

Keywords: Irksome Preseptal Cellulitis; Squint Surgery; Inflammation

Introduction

Inflammation of the soft tissues anterior to the orbital septum is termed periorbital cellulitis or pre-septal cellulitis and affects the eyelids and adnexa [1]. Periorbital infections are infrequent but potentially sight threatening complications of strabismus surgery [2] hence it has to be diagnosed and treated at the earliest. Pre-septal cellulitis due to hypersensitivity reaction to Polyglactin 910 (Vicryl) (Ethicon, Somerville, NJ) suture material has never been reported. It is a commonly used absorbable suture in strabismus surgery. However, it is reported to have low antigenicity and sparse inflammatory infiltrate [3]. Here we report a case of Preseptal cellulitis in post-operative squint surgery which was due to hypersensitivity reaction to suture material.

Case Report

A 33 years old female patient presented to us with history of squinting since childhood. She gave history of allergic sinusitis and mild asthma. After complete examination, she was diagnosed with Left Superior Oblique palsy with inferior oblique overaction of +3 with exotropia. She underwent squint surgery in left eye under strict aseptic precaution- recession of Lateral rectus and resection of medial rectus with modified Elliot and Nankins procedure for inferior oblique under local anaesthesia. Sutures used were 6-0 vicryl for muscles and 8-0 vicryl for conjunctiva. Surgery was uneventful. Patient was comfortable on post-operative day 1 with minimal congestion and chemosis. Patient was discharged with antibiotic steroid drops to be applied for 4 times in a day for a month.

On 7th Post-operative day (Figure 1), patient presented with sudden onset of irritation and watering in left eye. On examination, patient had lid edema, mucoid discharge with conjunctival congestion. Patient was diagnosed clinically with conjunctivitis. She was started on chloramphenicol/dexamethasone eye ointment 3 times a day, lubricating eye drop, Oral Amoxicillin- Clavulanic acid and oral Diclofenac Sodium. A conjunctival swab was also taken and sent for culture sensitivity, before starting the treatment, which later came out to be negative.



Figure 1: Image showing the lid edema and discharge on postoperative day 7.

On post-operative day 11th, patient came for follow up with itching in eyes and found to have pre-septal cellulitis with conjunctival congestion. Considering history of sinusitis, a CT scan PNS was taken which showed maxillary sinusitis in the left side. Patient was started on intramuscular injection of cefotaxime 1 g/day for 7 days and oral Prednisolone acetate 50 mg by the ENT surgeon. However, after 1 week the treatment was stopped with no improvement on preseptal cellulitis, on advice from ENT surgeon asking us to rule out other causes of preseptal cellulitis.

On the 3rd postoperative week (Figure 2), she had persistence of symptoms with severe itching. She had lid edema, full ocular motility, with conjunctival congestion and chemosis along the area of lateral rectus and medial rectus muscle insertion. Conjunctival sutures were removed following which, itching has drastically reduced.



Figure 2: Showing preseptal cellulitis with conjunctival congestion on 3rd postoperative week.

On 4th week (Figure 3), patient presented with preseptal cellulitis along with skin excoriation around the eye. On a suspicion of contact dermatitis due to excessive usage of topical medication, a decision was taken to stop all topical medication and she was started on IV dexamethasone 2cc for 3 days followed by oral Prednisolone 40 mg on slow tapering dose. After this lid edema started to resolve (Figure 4) and patient was comfortable symptomatically. Patient came on 7th week with complete resolution of symptoms.

Throughout the course of condition, patient was taking selfie photographs using her phone everyday and kept sending to us and was regularly following up which helped us to monitor the progression.



Figure 3: Showing features of contact dermatitis with lid edema on 4th week.



Figure 5: 5th week postoperative picture showing resolving preseptal cellulitis after starting oral steroids.

Discussion

Periocular infection is very rare following squint surgery. According to various studies, the incidence of periocular infections are in range from 1 in 1100 [4] to 1 in 1900 [5] cases. Source of infection could be intra-operative contamination, self-contamination after surgery due to bad hygiene and not taking proper post-operative measures or due to spread of infection from concomitant sinus infection. In a study conducted by House, *et al.* [6] Pre-septal cellulitis was found to be in almost 38% of cases with post-operative infections. Hence suspected an infective cause when the patient first presented with pre-septal cellulitis. But the point that was against the infectious etiology was lack of pain in our patient.

Since the patient had severe itching which typically resolved following removal of sutures, we suspected in terms of hypersensitivity to suture material. The suture used here was polygalactin 910 (vicryl 6-0 for muscle and 8-0 for conjunctiva). Absorption of vicryl

occurs by hydrolysis, starts by first week and is complete by approximately by 56 - 70 days [7]. Overall incidence to vicryl allergy is 1.5% [8]. Both immediate and delayed tissue reaction following use of absorbable suture have been described in literature.

The favourable points for the suspected allergic reaction in this case were:

1. History of allergic sinusitis, making the patient more prone for allergies.
2. Symptoms of itching, signs of conjunctival congestion and preseptal cellulitis which started on post-operative day 7 - when the possible hydrolysis of suture material would have started.
3. Itching of eye was drastically reduced on removal of conjunctival sutures.
4. Conjunctival hyperemia and swelling over the area of operated muscle.
5. Resolution of pre-septal cellulitis started with systemic steroids.
6. Patient was completely symptoms free by 8 weeks which is approximately the time taken by vicryl sutures to get absorbed.

Conclusion

To our knowledge, this is perhaps first such reported case. With this case, we want to highlight the fact that Vicryl suture allergy can present with irksome preseptal cellulitis following squint surgery which can confuse the clinician for proper diagnosis and management. Hence, hypersensitivity to suture material must be considered as differential diagnosis for a non-responding preseptal cellulitis following strabismus surgery. We also stress the importance of frequent follow up by patient, continuous communication using technology and documenting recovery through photographs which enables in monitoring progress both for patients and clinician - especially in chronic conditions.

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