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Symblepharon Following Seizure: Clinical Case Scenario and Review of Literature

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Abstract

A 5-year old girl had generalized convulsion that lasted 5 minutes following a febrile illness. Two weeks after, she presented with symblepharon involving the medial part of lower lid, bulbar conjunctiva and caruncle. Patient had a successful surgical synechiolysis and fornix maintained with regular rodding. It was concluded that symblepharon and other avoidable complications can follow a poorly managed seizure spell.

Keywords: Ocular Complications, Seizure, Symblepharon

1. Case History

A 5-year old girl had tonic clonic generalized convulsion following a febrile illness. The duration was five minutes. It was the first episode, no manifest aura or urinary incontinence. There was clenching of teeth and upward rolling of the eye balls. The mother attempted separating the teeth with her fingers while local remedies such as onions were applied to the eyes.

The patient presented 2 weeks after with history of inability to open the left eye very well, tearing, redness and visual impairment. There was no previous history of ocular trauma or other eye problem.

Torch light and slit lamp examinations reviewed vision of 6/6 (right eye), 6/18 (left eye). There were restricted ocular movements in the left eye involving the temporal quadrants. Other findings were on the left eye. The conjunctiva was diffusely hyperemic more in the caruncle and nasal fornix with associated mucopurulent discharge. There was a fibrotic band of conjunctival tissue originating from the forniceal area and tethering the left lower lid to the caruncle. This restricted up gaze and other movements of the left globe. The cornea was covered by the lower lid up to 3mm above the inferior limbus with increased tears meniscus. There was no loss of corneal sensitivity or staining with flourescein. Other parts of anterior and posterior segment examinations were within normal limits (Figure 1).

2. Medical and Surgical Interventions

Attempts made to manually separate the left lower lid from the globe were not successful because of cicatricial adhesion between the bulbar and forniceal conjunctivae. The patient underwent synechiolysis under sedation and analgesia. Rodding with a thermometer bulb was recommended with eye ointment and patient was seen regularly to monitor progress (Figure 2).

3. Symblepharon: Pathomechanism and Literature Review

Symblepharon is the adhesion of the surfaces of bulbar and palpebral conjunctivae resulting in obliteration or

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shortening of the fornix. This restricts ocular movements and severe cases cause diplopia and ocular discomfort.

The conjunctiva is a mucous membrane like the buccal, Urogenital and respiratory mucosae. In instances of inflammation with associated mucoid or mucopurulent secretions, mucosal ulcerations or trauma, healing might result in synechiae formation if two mucosal surfaces come in close contact. Symblepharon has been reported in ocular surface disturbances such as chemical burns[1], ocular circatricial pemphigoid[2], post-pterygium excision[3], and Steven Johnsons Syndrom[4].

In a rare syndromic association with ankyloglossus, Rizos et al[5] reviewed that some cases of symblepharon have multipolar genetic expresssivity. Acute generalized exanthematous pustulosis (AGEP) has been described by Speeckaert et al[6] in which a possible drug allergy or acute infections elicit significant adverse cutaneous reactions. These reactions inform of multiple disseminated sterile pustules include mucosal lesions, stomatitis, kerato-conjunctivitis, symblepharon and influenza-like symptoms.

4. Discussion

Although symblepharon arises from multiple origins, there is a common pathway of breached or unhealthy mucosal surfaces that heal with scar tissue formation. In this index case, there are two basic etiological possibilities: mucosal irritation by onions or conjunctival laceration with nails in forceful attempts to separate tightly clenched teeth. On a meticulous examination, there was a scar at the bridge of the nose of the patient (Figure 1) which might have been sustained during the emotive efforts to separate the teeth. The mother's nails could be culpable being unduly long and unkempt at the time of presentation. The authors are of the opinion that trauma from nail injury was more likely the agent of mucosal injury. Finger nail was more culpable because onion was applied to both eyes but only the left eye developed symblepharon. The plausibility exists that onion compounded a nail injury sustained to the left eye. In what appears to be a remote possibility, Megbelayin et al[7] had opined that the left eye is more likely to be injured in a fist assault and by extension inadvertent fist injury by a right-handed individual.

There are several scholarly articles[8-10] on seizures in developed and developing countries but to the best of our knowledge none has reported its occurrence with symblepharon. Seizure is a frightening experience and the eye is often the least area of interest during an attack. It is therefore not surprising that the relation of a seizure victim and perhaps the attending internist pay limited attention to its ocular sequelae. Note-worthy is that ocular signs are prominent features of a seizure spell and bound to attract diverse interventional measures. In the case under review, onion was used which could cause serious ocular surface irritation, and subsequent conjunctival surface adhesion especially with secondary bacterial infection.

The application of home remedies such as herbal preparations, urine, breast milk, onions and kerosene to treat eye conditions is a common occurrence in Nigeria and other parts of Africa[11-13]. The consequence of this unorthodox practice is avoidable blindness often from significant corneal morbidity.

It is hoped this report has created a much needed awareness that within the spectrum of ocular disturbances that could result from a seizure episode is symblepharon. Symblepharon is associated with significant ocular morbidity and persists long after the seizure has been forgotten. It is therefore recommended that creation of public awareness on seizures should embrace preventing ancillary complications that result from various interventional efforts.

Figure 1. Pre-Operative Outlook.

Figure 2. Post-Operative Outlook.

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