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Resolution of self-injurious behavior in a nonverbal and developmentally delayed patient after surgical treatment of a blind painful eye

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ABSTRACT

Changes in behavioral patterns can be the only indication of the presence of pain in nonverbal patients. Phthisis bulbi results in shrinking, disorganization, and sometimes severe inflammation of the ocular globe and can occur after eye injury or multiple eye surgeries. Chronic tearing, frequent eye rubbing, and self-injurious behavior focused around the eye and periocular region may indicate ocular discomfort in nonverbal patients. In eyes that become painful and refractory to medical treatment, ocular evisceration or enucleation can provide immediate pain relief. An ocular prosthesis provides excellent cosmetic results to restore normal facial appearance after surgery.

1. Case report

A 24-year-old nonverbal male with trisomy 21 presented with recurrent right periocular soft tissue excoriations. He had a history of unwitnessed right ocular trauma when he was 14 years old that resulted in a blind, inflamed right eye which was treated with anti-inflammatory eye drops. After the injury occurred, the patient displayed right sided facial self-injurious behavior that required protective headgear and mittens for the last ten years.

The examination was remarkable for a right inflamed and phthisical globe. There were also multiple right periocular linear excoriations and scars in different stages of healing (Fig. 1A). A head CT was negative for intraocular malignancy and only revealed intraocular calcification in the right eye consistent with an end-stage atrophic globe (Fig. 2). The patient underwent an evisceration with placement of an orbital implant (Fig. 1B). The patient's parents and caretakers commented on post-operative day one that he had markedly decreased self-injurious behavior. Within one month, the patient had resolution of self-injurious behavior and no longer needed protective devices. The patient was fitted for an ocular prosthesis (Fig. 1C). He had an excellent cosmetic result and did not experience any social stigmata at his group home after the removal of his right eye.

2. Discussion

This case describes an atypical presentation of eye pain in a nonverbal and developmentally delayed patient to call attention to a potentially neglected clinical problem: recognition of chronic ophthalmic pain symptoms in nonverbal patients. Behavioral patterns can be the only indication of the presence of pain in nonverbal patients.[1] Chronic tearing, agitation, self-injurious behaviors, or even benign actions such as frequent eye rubbing may indicate ocular discomfort in nonverbal patients and be misattributed as behavioral problems by caregivers.

Phthisis bulbi results in shrinking, disorganization, and sometimes severe inflammation of the ocular globe, and can occur after eye injury or multiple eye surgeries. In this case, the patient suffered from chronic pain secondary to an inflamed phthisical eye, but was untreated for ten years because his caregivers attributed his actions to a behavioral disorder. Therefore, clinicians taking care of nonverbal developmentally delayed patients should be mindful of behavioral changes as an indication of physical pain. In eyes that become painful and refractory to medical treatment, ocular evisceration or enucleation can provide immediate pain relief.[2] An ocular prosthesis provides excellent cosmetic results to restore normal facial appearance after surgery.

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Fig. 1. (A) The patient at presentation with soft tissue excoriations of the right lower lid and cheek with serous drainage and crusting, as well as multiple linear scars isolated to the right periocular and forehead region. Note the lack of findings on the left side of the face. (B) The patient two weeks after evisceration of the right eye. A tarsorrhaphy is in place to aid in healing. At this time, the patient no longer had self-injurious behavior of the right periocular region. (C) One week after placement of a right ocular prosthesis. Note the close match in appearance of the right prosthesis to the left eye.

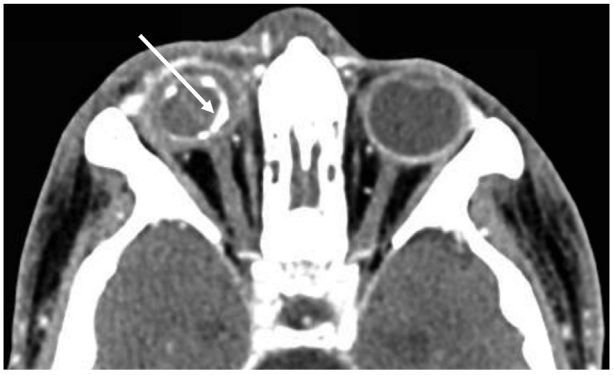

Fig. 2. Axial CT showing the right phthisical eye. The right globe is smaller than the left, and has developed intraocular calcification (arrow) consistent with an end-stage atrophic globe.

Patient consent

A written consent was obtained from the patient's legal guardian for the publication of this case report, including clinical images.

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Conflicts of interest

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Authorship

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ajoc.2019.03.011.

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