

Eye complications from self-injury in a child

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A 14-year-old boy with autism spectrum disorder was referred to a pediatric eye clinic for a “blue haze” in both eyes. He had a history of self-injury, which included hitting his head and vigorous eye rubbing that had led to bilateral lichenification of the eyelids (Figure 1A). On examination, the patient had cataracts bilaterally (Appendix 1, available at www.cmaj.ca/lookup/suppl/doi:10.1503/cmaj.171241/-/DC1), with a retinal tear and a chronic retinal detachment in the right eye (Figure 1B) and an acute shallow retinal detachment in the left eye. In an effort to preserve vision, an urgent surgical repair of the retinal detachment and cataract extraction with intraocular lens implantation for the left eye were performed, which healed successfully with the aid of a safety helmet incorporating eye protection postoperatively. In the right eye, cataract and retinal surgery with vitrectomy and silicone oil were performed; however, the long-standing retinal detachment failed to reattach. Overall, the patient underwent 25 (15 under anesthesia) eye examinations and seven procedures over three years of follow-up. At the last follow-up, he had no light perception in his right eye and navigational vision only in his left eye.

Self-injurious behaviour is uncommon in children¹ but has a prevalence of about 50% among those with autism spectrum disorder.² Repeated blunt trauma to the head and eyes has been associated with cataract and retinal detachment,³ and chronic eye rubbing can cause biomechanical weakness and deformation of the cornea, leading to keratoconus.⁴

Children with self-injurious behaviour may be unable to report decreased vision because of severe communication impairment and restricted daily living skills;⁵ thus, traumatic cataracts and retinal detachment may be undetected until caregivers note changes in visual behaviour and leukocoria (white pupillary reflex). Routine examination of the red reflex in children with self-injury and timely referral to an ophthalmologist may reduce the complexity of surgical repair and optimize visual function.

Self-injurious behaviour in children with autism spectrum disorder may decrease in severity with age but often persists into adulthood.⁶ The use of a safety helmet with eye protection may be an effective strategy to reduce postoperative and long-term risk of repeated injury, and may also extinguish the sensory stimuli from self-injury that perpetuate maladaptive behaviour.⁷

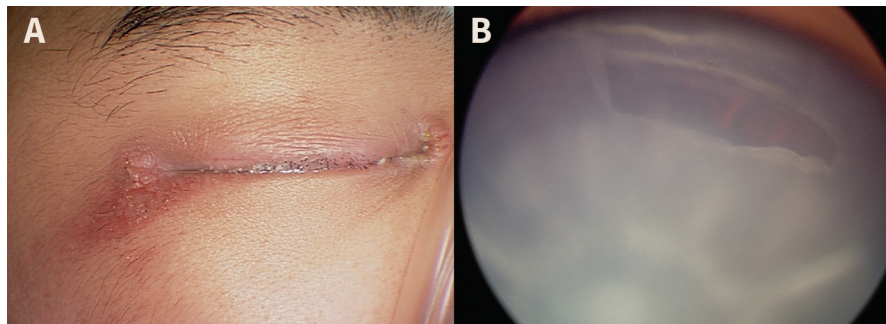


Figure 1: (A) Traumatic loss of eyelashes and eyelid lichenification and (B) a large retinal tear, subretinal fluid and a long-standing retinal detachment in the right eye of a 14-year-old boy with autism spectrum disorder and self-injury.

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