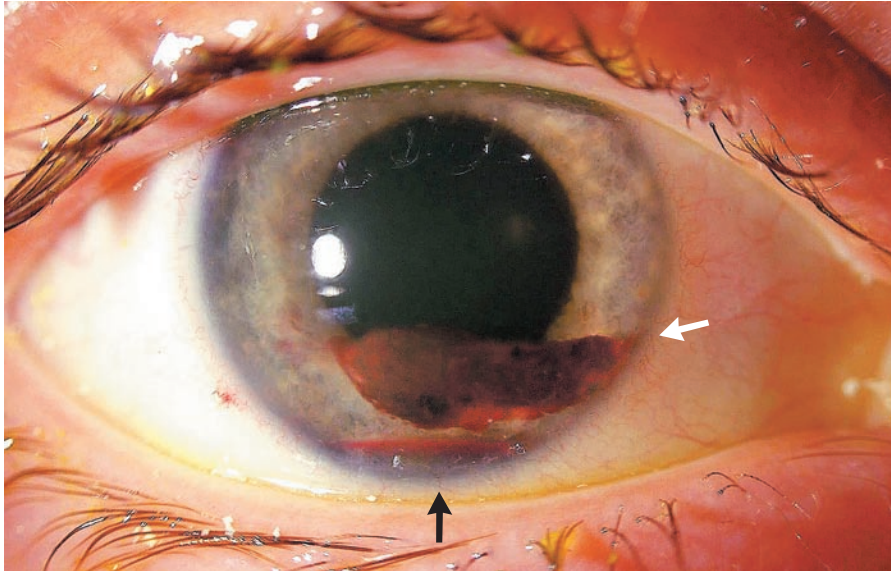


IMAGES IN CLINICAL MEDICINE

Ocular Trauma Due to a Water-Bottle Cap



A 14-YEAR-OLD GIRL PRESENTED WITH A TRAUMATIC INJURY TO THE right eye from a water-bottle cap, caused by the increasingly popular adolescent activity of twisting and crushing an empty plastic water bottle, with the cap loosened, until the cap flies off because of increased pressure. The patient's vision was limited to hand motions, and the intraocular pressure was 13 mm Hg. A 70% hyphema was present. Vision improved slowly with clearing of the hyphema. On day 4, she experienced severe eye pain and decreased vision. The blood clot in the anterior chamber (white arrow) had decreased in size, and a 2-mm layered hyphema was present (black arrow), but intraocular pressure had risen to 42 mm Hg. She was given maximal glaucoma therapy. On day 9, intraocular pressure rose to 48 mm Hg, and the patient had severe pain and nausea and could see only hand movements; urgent surgical intervention — an anterior-chamber washout — was required. The eye pressure had increased as a result of obstruction of the trabecular meshwork by red blood cells, fibrin, and inflammatory cells. On postoperative day 1, the patient's vision improved to 20/40, and intraocular pressure was 15 mm Hg while she was receiving timolol. She currently has 20/20 vision and intraocular pressure of 18 mm Hg without glaucoma medications. Late complications after this type of injury include cataracts and glaucoma. The sources of adolescent eye trauma often involve objects that require adult supervision or can be protected against by the use of goggles (such as in paint ball injuries). The source of this patient's injury — a water-bottle cap ejected under pressure — warrants attention because of the increasing incidence of this activity among adolescents and other school-aged children.

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