Symptomatic iris varix with enlargement following argon laser

Iris varix is a rare iris lesion that may be mistaken for a malignant neoplasm.[1] Thirty-six cases have been described since 1975, most treated by resection without recurrence, although spontaneous regression has been reported.[2] Most varices have been described as large, lobulated, well-circumscribed black or red lesions of the iris that may be associated with spontaneous hemorrhage, although smaller varices have been described as prominent, elongated, and tortuous vessels.[2,3] Although benign, iris varices may be of sufficiently suspicious appearance as to warrant a detailed work-up to exclude other etiologies such as hemangiomas or melanomas. We describe a case of pathologically confirmed symptomatic iris varix that unexpectedly worsened following argon laser photocoagulation.

An otherwise healthy 84-year-old male was referred to our service with a 4-month history of intermittent hyphema associated with acute decreases in vision in his left eye. Ocular history was significant only for antecedent cataract excision with intraocular lens implantation 10 years previously and YAG laser capsulotomy 4 months previously, at which time the lesion was first noticed. The patient had a history of well-controlled hypertension and diabetes mellitus and no personal or family history of bleeding disorder, malignancy, or similar eye problem. He was not taking any anticoagulant medications.

At his initial examination, the vision in his left eye with correction was 20/30, and intraocular pressure measured by Goldmann applanation tonometry was 21 mm Hg. Slit-lamp examination revealed a 4 × 2 mm lobulated vascular mass at

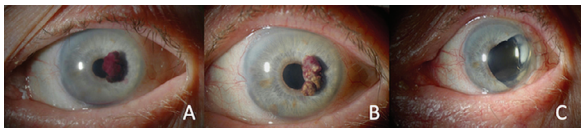

Fig. 1—Stages of the iris lesion: (A) initial examination of patient's left eye iris lesion and inferior hyphema; (B) enlargement of lesion after argon laser photocoagulation; (C) six months after wedge iridectomy with no hyphema or visible remnant of lesion.

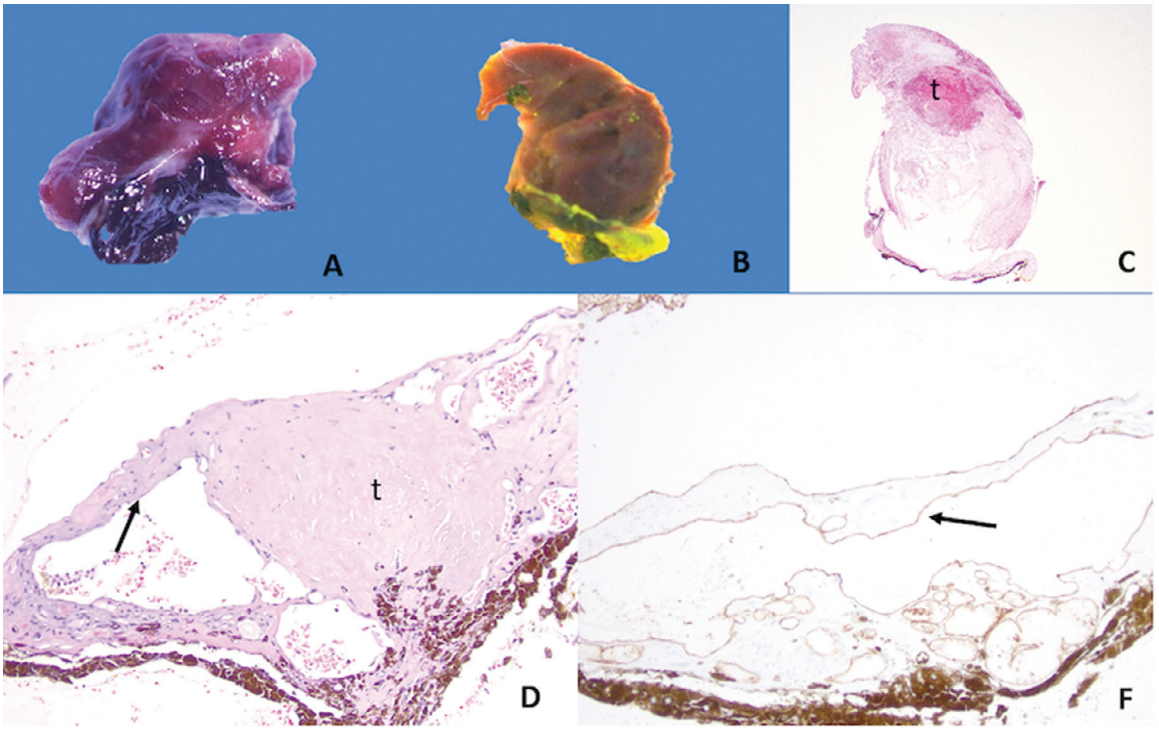

Fig. 2—Pathologic findings of the iris varix: (A) macroscopically, the lesion is lobulated and tan-red on the surface of the iris (dark brown at the bottom); (B) the lesion bisected shows a dark red surface of clotted blood; (C) low-power view of the histologic section shows a very thin wall surrounding the focally thrombosed centre of the vessel (t), and the iris stroma is at the bottom of the lesion (H&E stain; 1.25 × original magnification); (D) close-up view of the base of the lesion shows a largely dilated vessel with a thin wall lined by endothelial cells (arrow) and clotted thrombus (t) (H&E stain; 4 × original magnification); (E) immunohistochemistry using CD31 labels the endothelial cells in brown (arrow) (immunohistochemistry, CD31 antibody, DAB chromogen; 1.25 × original magnification).

the temporal pupil with no frank feeder vessels and layered microhyphema with 2+ circulating red blood cells (Fig. 1A). Funduscopic examination was significant for posterior vitreous detachment with red blood cells visible in the anterior vitreous. There was no evidence of neovascularization in the anterior or posterior segment. Ultrasound evaluation demonstrated a solid 3.6 × 1.8 mm anterior iris lesion without visible extension into the stroma or beneath the iris. Fluorescein angiography revealed no early or late enhancement of the lesion, suggesting the diagnosis of iris varix.

Three months after presentation, the patient underwent argon laser photocoagulation:

(577 nm, 400 MW, 0.2 s duration, 500 μm spot size, 219 applications) in an attempt to induce regression and treat recurrent hyphema. The lesion was stable without hemorrhage in the early postoperative period (Fig. 1B). Three months later, however, the lesion had enlarged, and the hyphema had recurred. Four months following laser photocoagulation, the patient presented with 95% hyphema and intraocular pressure elevation to 35 mm Hg. He was taken to the operating room for anterior chamber washout and surgical excision of the lesion. Histopathologic analysis confirmed an iris varix (Fig. 2). The patient has had no recurrence of the lesion or further hemorrhage to date (Fig. 1C).

Based on our review, fewer than 40 cases of iris varix have been reported in the literature, with the largest previously documented lesion at presentation being 2.2 × 1.9 mm by ultrasound biomicroscopy compared with 3.6 × 1.8 mm in our patient.[4] Argon laser photocoagulation has been established as an effective treatment for recurrent bleeding iris lesions.[5] However, consistent with the case reported by Matlach et al.,[4] our patient experienced worsened spontaneous hyphema as well as markedly increased lesion size following Argon laser treatment. Our case suggests that iris varices can be larger than previously described and that caution should be taken when treating iris varices with the argon laser because they may behave differently from other bleeding iris lesions and respond with worsening symptoms. Based on our case and the previous literature, excision may remain the best present treatment for large symptomatic iris varices.

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Footnotes and Disclosure

The authors have no proprietary or commercial interest in any materials discussed in this article.