Congenital Anomalous Retinal Artery Associated With a Leaking Macroaneurysm

Congenital anomalous retinal artery is a unilateral vascular anomaly with an excellent visual prognosis. Aberrant macular vessels are rare. Anomalous macular veins, although rare, are more common than anomalous macular arteries.

Report of a Case. A 71-year-old man was referred to the retina service for “bleeding behind the right eye.” His medical history was significant for ischemic heart disease, hypertension, and emphysema. He was using antiglaucoma medication. On examination, his best-corrected visual acuity was counting fingers at 4 m OD and 20/50 OS. Results of anterior segment evaluation were unremarkable, with normal intraocular pressure.

Ophthalmoscopy of the right eye revealed an aberrant artery that extended from the inferior temporal arcade (Figure 1), crossed the macula, and was associated with a macroaneurysm, subretinal hemorrhage, and macular edema. The posterior segment of the left eye was normal (Figure 1, insert).

Fluorescein angiography confirmed the presence of the anomalous inferior temporal branch along with a leaking macroaneurysm in the macular area (Figure 2). There was evidence of early filling and late emptying of the aneurysm (Figure 2). Because of macular involvement, the patient underwent focal photocoagulation (532-nm green laser). Six weeks following treatment, his visual acuity improved to 20/100 OD.

Comment. A congenital retinal macrovessel is a rare, unilateral retinal vascular anomaly. This large anomalous vessel may cross the foveal region and horizontal raphe. In our patient, fluorescein angiography demonstrated early filling with delayed emptying of the aberrant vessel associated with a dilated capillary bed surrounding the macrovessel. Congenital retinal macrovessels are typically associated with normal visual acuity.

Macroaneurysms are usually solitary, acquired dilatations of retinal arteries associated with hyper-
tension and atherosclerosis. Venous aneurysms have also been reported. Elevated intraocular pressure may predispose to leakage.

While congenital anomalous macrovessel is frequently a stable clinical entity, our patient had a congenital retinal macrovessel that crossed the medial raphe and was associated with a leaking juxtafoveal macroaneurysm. We postulate the possibility of the patient’s hypertension and vascular disease causing the development of a macroaneurysm in association with an anomalous artery. A leaking macroaneurysm of an anomalous artery crossing the fovea is an unusual occurrence and, to the best of our knowledge, has not been previously reported.

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