

More Than Meets the Eye:

Acute Presentation of BRVO During Initial Scleral Lens Fitting

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Background

Branch retinal vein occlusion (BRVO) is an occlusion at one of the branches of the central retinal vein. The prevalence is estimated to be between 0.5% and 1.2%. In 99.9% of cases, occlusions of the branch retinal veins arise from arteriovenous crossings, due to compression of the artery on the vein. Systemic conditions such as hypertension, atherosclerosis, diabetes mellitus, and coagulation disorders are common causes of these compressive changes. Expected visual acuities following BRVO are typically 20/50-20/60.

Case Presentation

A 68-year-old white female was referred to the contact lens clinic for a scleral lens evaluation. She had been in scleral lenses for several years following a limbal stem cell deficiency diagnosis. During examination, the patient reported a new, sudden onset of flashes and loss of vision occurring for one day. The scleral lens fitting was postponed for several weeks.

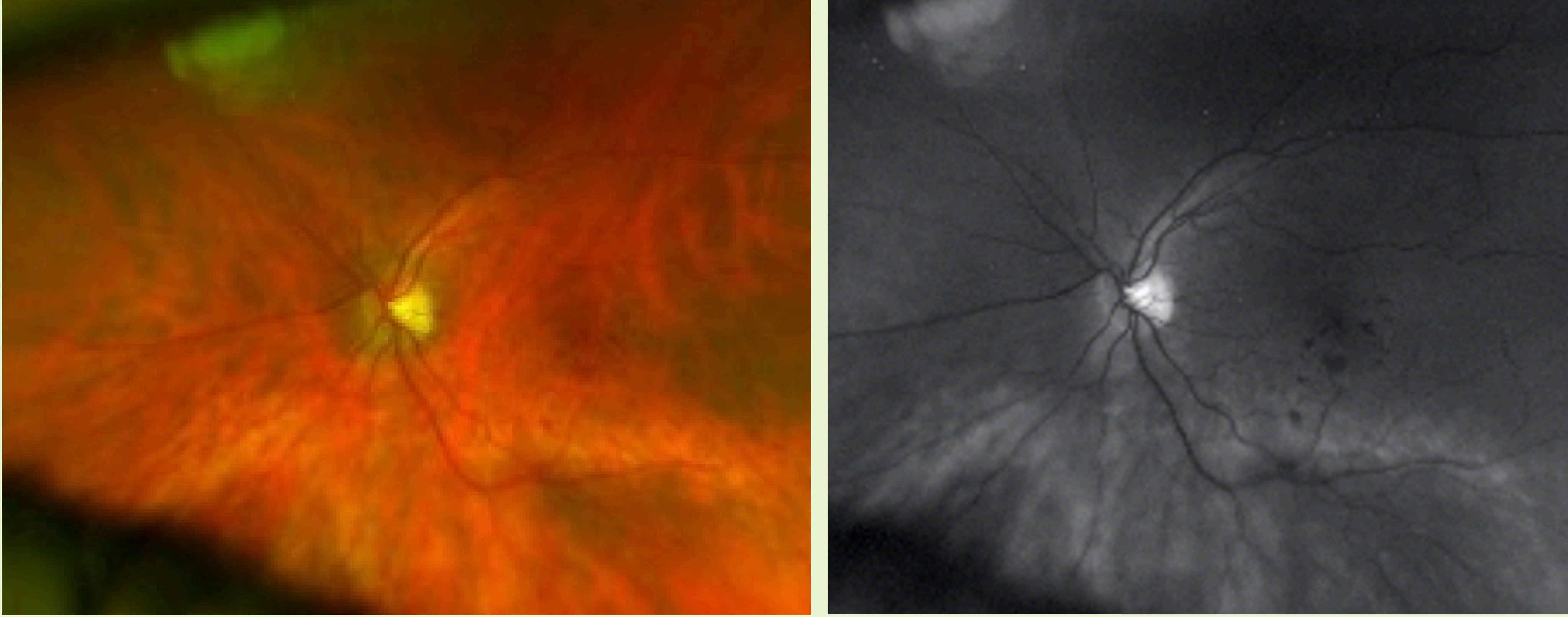
Entering VA w/ scleral lenses	OD: 20/60+2, PH: 20/25-2 OS: 20/60+1, PH: 20/30-2
Refraction	OD: -2.00 -4.00 X 050, 20/150 OS: -2.50 -1.00 X 015, 20/40
Conjunctiva	OD & OS: 1+ injection
Cornea	OD: (+) NaFl staining at limbus 360°; neo 2 mm into peripheral cornea 360° OS: (+) NaFl staining at limbus 360°; neo 3 mm into peripheral cornea 12:00-2:00, wispy appearance of blood vessels
A/C	OD & OS: Deep and quiet
Optic Disc	OD: NRRI, C/D 0.4 rnd OS: NRRI, C/D 0.4 rnd
Macula	OD: Flat & intact, (-)edema OS: Flat & intact, (-)edema
Retina	OD: (-) holes, breaks, tears OS: Dot/blot hemes IT; suspected neovascularization

Differential Diagnoses

Branch retinal vein occlusion	Vitreous degeneration
Hypertensive retinopathy	Diabetic Retinopathy

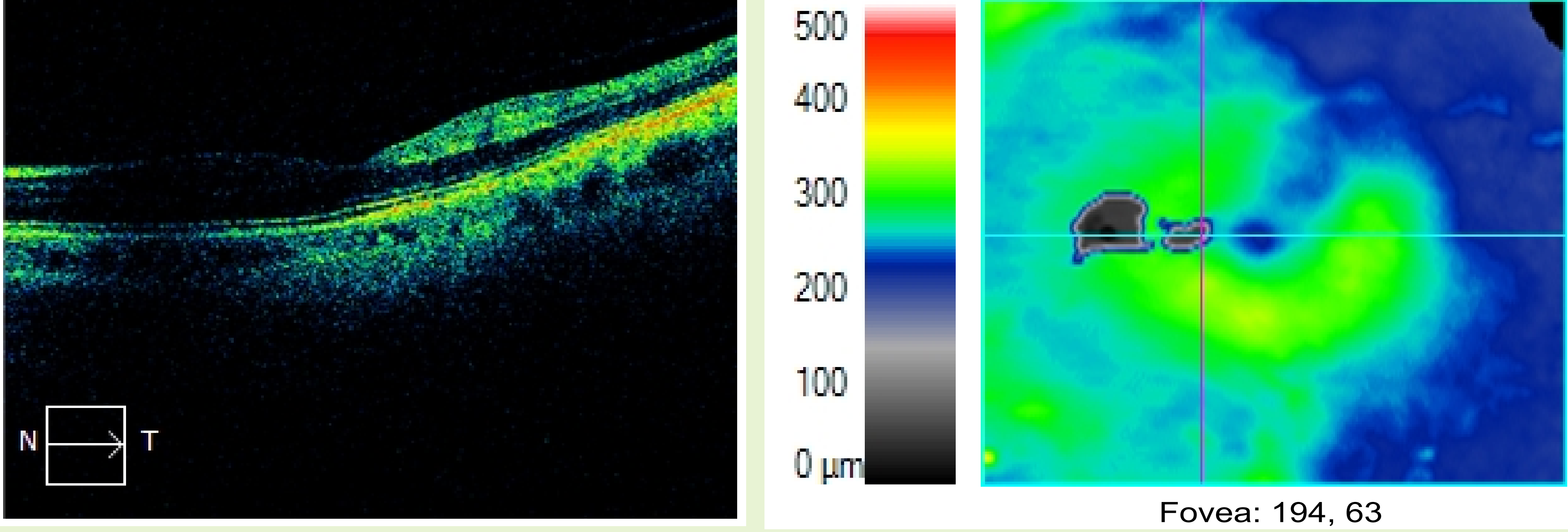
Retinal Findings

Fundus Photo



Macular OCT

OS Horizontal B-Scan BScan: 63 OS ILM-RPE Thickness Map



Fovea: 194, 63

Treatment and Management

A dilated fundus examination was performed revealing a suspected BRVO. Images were taken for documentation and a macular OCT was performed. The patient was referred to a retinal specialist the same day for evaluation and was dismissed from further care. Three and a half weeks later, the patient was diagnostically fit into a new brand of scleral lenses. Initial scleral lenses were dispensed at the next appointment with improved comfort and vision. The patient returned to clinic for a scleral lens check three weeks later, and a new set of lenses were ordered with minor central clearance changes. The patient has had no recurrences of BRVO symptoms since the initial visit and is a successful scleral lens wearer.

Discussion

Branch retinal vein occlusion is a vascular disorder characterized by a blockage of one of the branches of the CRV. The blockage is most often caused by arterial, venous, or blood coagulability changes within the vascular system. BRVOs are the most common ocular vein occlusion, followed by CRVOs. Patients with BRVO may be asymptomatic or notice visual impairment in certain times of the day or body positioning. This patient noticed flashes of light and loss vision, which are atypical symptoms of BRVO and not well-discussed in the literature. There is no cure for BRVO and treatments aim to reduce macular edema.

Conclusion

This case highlights the importance of addressing patient’s concerns, regardless of their reason for visit. Patient’s often have more than one diagnosis, and it is crucial for eye care providers to recognize symptoms and treat appropriately. In patients with BRVO, a quick referral to a retinal specialist is vital for evaluation and management.

References

- Jaulim, A., Ahmed, B., Khanam, T. & Chatziralli, I. P. (2013). Branch Retinal Vein Occlusion. Retina, 33 (5), 901-910.
- Mirshahi A, Feltgen N, Hansen LL, Hattenbach LO. Retinal vascular occlusions: an interdisciplinary challenge. Dtsch Arztebl Int. 2008 Jun;105(26):474-9.