Dear Editor,

The important article by Kashani AH, Zhang Y, Capone A, et al. (Impaired retinal perfusion resulting from vitreoretinal traction: A mechanism of retinal vascular insufficiency. *Ophthalmic Surg Lasers Imaging Retina.* 2016;47:215-223) reveals that non-central vitreoretinal traction (VRT) might cause retinal vascular insufficiency along the distribution of the vessels affected by the traction. The authors present adults with branch retinal vein occlusion (BRVO), nonproliferative diabetic retinopathy, and eyes with stage-2B retinopathy of prematurity. Each eye was complicated by VRT at a site located away from the central macula. Following surgery to relieve VRT, vascular perfusion substantially improved in each. Diagnosis of noncentral VRT was made only when the tractional membrane became thick enough to be visible during funduscopy. Diagnosis was then verified in the adult eyes by directing the OCT scans to these membranes.

Another important finding in the adults with BRVO and diabetic macular edema (DME) was documented by the spectral-domain optical coherence tomography (SD-OCT). In each, the preoperative central macular edema resolved following the surgery.

We have presented, using 3-D SD-OCT (Topcon 3D OCT-1000; Topcon, Tokyo, Japan), a common prevalence of noncentral, extrafoveal tractional membranes in diffuse DME (34.5%; 20 of 58 cases) and BRVO (45.5%; five of 11 cases) and their association with central macular edema. These were detected during routine thorough search for tractional membranes in eyes with diffuse macular edema, before they became visible by funduscopy. Direct association between these noncentral extrafoveal tractional membranes and the central macular edema was confirmed by using the full-field 3-D SD-OCT approach that included 360° viewing of the examined fields by video clips, as documented and summarized. Such association was later reported by others in DME and BRVO. Nowadays, new OCTs enable 3-D wide-field imaging, which would facilitate diagnosis of noncentral traction and its association with the central macula pathology.

In our studies on macular edema associated with VRT and/or vitreopapillary traction (VPT), we adopted the title “extrafoveal traction.” That term seems to have advantages over “VRT” since it a) includes VPT that might be associated with macular edema, b) indicates that most noncentral vitreous traction sites associated with foveal pathology are located between the vascular arcades, according to our data, and c) differs it from vitreofoveal traction.

The findings and surgical outcome in the study by Kashani et al. fortifies the importance of early and thorough OCT search for extrafoveal traction membranes in eyes that suffer central vascular insufficiency or diffuse macular edema, even before such membranes become visible, for the right decision-making.

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REFERENCES


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