Correspondence

Re: Maggio et al.: Vitreomacular adhesion and the risk of neovascular age-related macular degeneration (Ophthalmology. 2017;124:657-666)

TO THE EDITOR: We have read with interest the recent publication of Maggio et al, wherein they report no relationship between the state of the vitreomacular interface and the risk of neovascular age-related macular degeneration (AMD). This finding is in contrast with multiple previous studies, which found that the presence of a posterior vitreous detachment (PVD) was associated with dry AMD, whereas vitreomacular adhesion is a risk factor for exudative AMD.1-3 Studies have also found that vitreomacular adhesion hampers therapy with anti-vascular endothelial growth factor injections, necessitating more injections with poorer results.4 One possible explanation for this incongruity is that this most recent study only used optical coherence tomography (OCT) to evaluate the state of the vitreous, and not ultrasound imaging, as previous studies have used. Indeed, in past studies ultrasound imaging was critical for accurately diagnosing the presence or absence of PVD.

It is well-known that a PVD often displaces the posterior vitreous cortex so far anteriorly that it cannot be imaged with conventional OCT (Fig 1). In older individuals with AMD, the vitreous is highly liquefied and more prone to farther anterior displacement of the posterior vitreous than in younger individuals.5 In the absence of perifoveal PVD, spectral-domain OCT alone is unable to distinguish between total attachment of vitreous to the posterior pole and PVD with remote anterior displacement. Thus, in this study many cases of PVD could have been interpreted as total vitreous attachment, introducing inaccuracy and influencing the findings and conclusions, which are inconsistent with previous studies that used ultrasound imaging, as well as OCT to accurately diagnose the state of the vitreoretinal interface. Future studies with swept-source OCT may well be able to distinguish between vitreous attachment and total PVD, as long as imaging is sufficiently anterior to detect a displaced posterior vitreous cortex.

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Figure 1. A, Ultrasound image from a 62-year-old man with posterior vitreous detachment (PVD). The typical sigmoid-shaped appearance of a PVD is evident and the detached posterior vitreous cortex is clearly visible anterior to the retina. B, Spectral-domain optical coherence tomography (OCT) of the same eye as panel A shows no evidence of PVD, despite maximizing visualization of the posterior vitreous body by placing the retinal image at the far bottom of the scan.