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Symptomatic Foveal Impingement following Posterior Vitreous Detachment Formation

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Introduction

A posterior vitreous detachment (PVD) develops following vitreous gel liquefaction and changes in the extracellular matrix of the vitreoretinal interface characterized by separation of the posterior cortex from the internal limiting membrane of the retina.[1] This ongoing aging process, ultimately leading to vitreoretinal dehiscence, may be associated with an anomalous PVD during its evoluion.[1] We hereby describe a 57-year old healthy woman who developed a symptomatic anomalous PVD over an eight year period that resulted in an abnormal foveal contour in the left eye along termed foveal impingement.

Case Report

A 57-year old healthy woman with no visual symptoms had good visual acuity of 20/20 in the right eye and 20/25 in the left eye in 2016. Anterior segment evaluation was unremarkable, and intraocular pressure was normal in both eyes. Dilated ophthalmoscopy revealed normal posterior poles bilaterally. No anatomic abnormality was observed in either eye on optical coherence tomography (OCT) (Figure 1A). The patient remained asymptomatic four years later in 2020. However, vitreomacular adhesion was present in the left eye, with normal foveal and macular contour on OCT (Figure 1B). In 2024, she developed posterior hyaloid separation from the macula in the left eye followed by metamorphopsia associated with an abnormal foveal contour (Figure 1C) termed foveal impingement. Visual acuity was 20/30 in that eye, and observation was recommended.

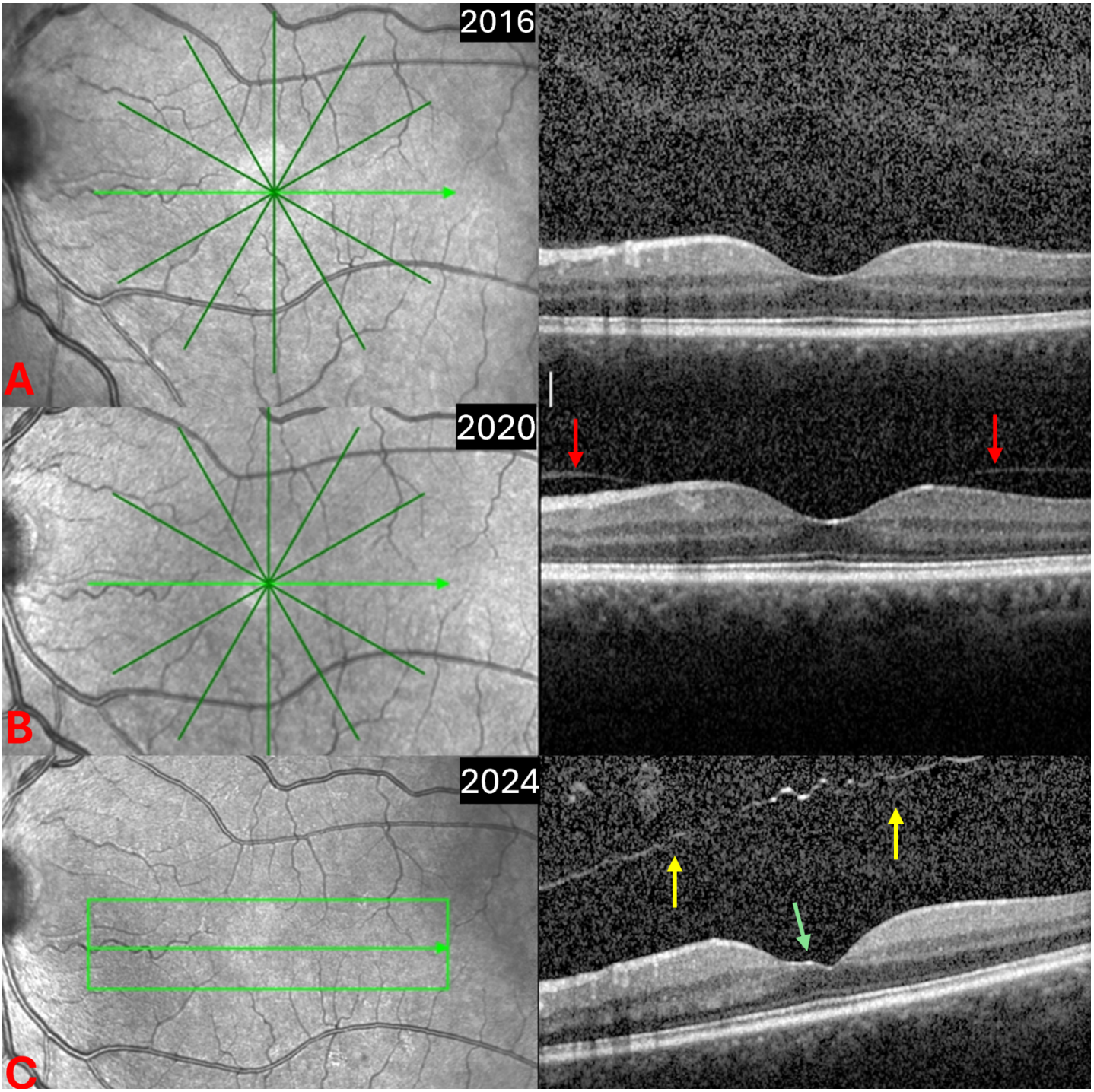

Figure 1. A. Normal macula with vitreomacular attachment in the left eye. B. Partial vitreomacular separation with normal foveal contour and no visual symptoms. C. Following vitreomacular separation, an abnormal foveal contour was evident on OCT with onset of symptoms. This OCT appearance has been termed foveal impingement.

Discussion

The international vitreomacular traction study group developed an OCT-based anatomic classification for vitreomacular interface diseases. This group described vitreomacular adhesion as perifoveal vitreous separation without foveal morphologic changes (Figure 1B).[2] In the case presented herein, we observed separation of the posterior hyaloid from the macula that resulted in an abnormal foveal contour associated with metamorphopsia. Marchese and colleagues described a 56-year-old man with X-linked Alport syndrome who developed a similar OCT finding to our case following vitreomacular separation and referred to this appearance as a staircase lamellar hole.[3] We propose that this OCT appearance following vitreomacular separation be referred to as foveal impingement.

References

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Statement of Ethics

This case report adheres to patient confidentiality and ethical principles in accordance with the guidelines of the Declaration of Helsinki and relevant local regulations. Consent was obtained from the patient for the publication of this case report.

Conflict of Interest Statement

The authors declare no conflicts of interest related to this topic.

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Authorship

We attest that all authors contributed significantly to the creation of this manuscript, each having fulfilled the criteria as established by the ICMJE.