

Spectral Domain-Optical Coherence Tomography in Spontaneous Regression of Vitreomacular Traction Syndrome

Vitreomaküler Traksiyon Sendromunun Spontan Regresyonunda Spektral Domain Optik Kohorens Tomografi*

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ABSTRACT

A 72-year-old man was referred to the ophthalmology department with decreased VA in his left eye. The fundus examination revealed a macular hole in the right eye and a dull foveal reflex in the left eye. Macular cystic spaces and incomplete posterior vitreous detachment with macular traction were detected in the left eye by spectral domain optic coherence tomography. One month later at the second follow up, the patient's best corrected visual acuity had improved to 20/20 in the left eye, and SD-OCT revealed resolution of the macular cysts and macular traction. Early spontaneous resolution should be kept in mind as a rare finding of vitreomacular traction syndrome, and SD-OCT imaging is an indispensable method for detecting macular pathologies before surgical planning.

Key Words: Vitreomacular traction syndrome, spectral domain optical coherence tomography, spontaneous resolution.

ÖZ

Yetmiş iki yaşında erkek olgu sol gözünde görme azlığı şikayeti ile oftalmoloji servisine başvurdu. Fundus muayenesinde sağ gözde maküler delik, sol gözde fovea reflexi silik olarak izlendi. Spektral domain optik kohorens tomografide sol gözde makülada kistik boşluklar ve inkomplet arka vitre ayrılması saptandı. Hastanın bir ay sonraki kontrolünde sol gözde görme düzeyi 20/20 seviyesinde ve maküladaki kistler ile maküler traksiyonun gerilediği izlendi. Vitreomaküler traksiyon sendromunun erken spontan regresyonu nadir görülen akıld tutulması gereken bir bulgudur ve spektral domain optik kohorens tomografi görüntüleme yöntemi maküler patolojilerin tespitinde cerrahi öncesi vazgeçilmez bir metottür.

Anahtar Kelimeler: Vitreomaküler traksiyon sendromu, spektral domain optik kohorens tomografi, spontan gerileme.

INTRODUCTION

Vitreomacular traction syndrome (VTS) is an unusual macular disorder in which incomplete detachment of the posterior hyaloid membrane resulted in traction on the macula.¹ VTS is frequently accompanied by decreased visual acuity (VA).² We present a case of early resolution of VTS documented by spectral domain-optic coherence tomography (SD-OCT).

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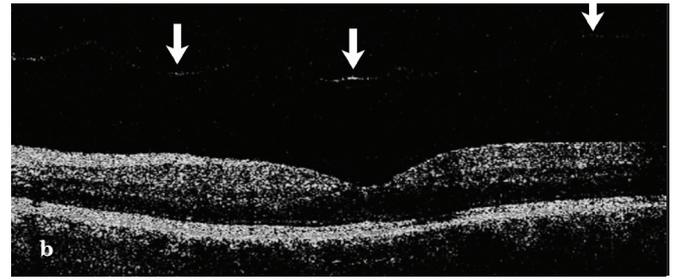
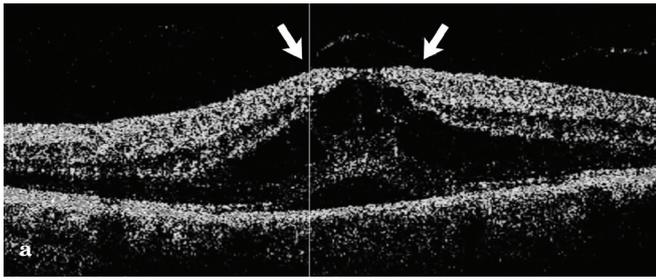


Figure 1a,b: Incomplete PVD and multiple macular cystic spaces with increased retinal thickness (569 μm) at the macula center (a). SD-OCT revealed resolution of macular traction, macular cysts and complete PVD (b).

CASE REPORT

A 72-year-old man was referred to the ophthalmology department with decreased VA in his left eye. Phacoemulsification surgery had been performed bilaterally without complication 6 months before. Best corrected visual acuity (BCVA) was 20/100 (right) and 20/50 (left) with the following refraction: right eye +1.00x80, left eye +1.50x170, respectively. The fundus examination revealed a macular hole in the right eye and a dull foveal reflex in the left eye. SD-OCT confirmed the presence of an incomplete posterior vitreous detachment (PVD), serous retinal detachment on the macula, and multiple cystic spaces with increased retinal thickness (569 μm) at the macula center (Figure 1a).

The patient was scheduled for surgery and 1 month after the surgery, his BCVA had further improved to 20/20 in the left eye and SD-OCT revealed resolution of the macular cysts and complete PVD without any attachment to the macula (Figure 1b). Repeat SD-OCT showed decreased retinal thickness (263 μm) at the macula center (Figure 2). At the 1-year follow-up, BCVA and fundus findings remained stable in the left eye.

DISCUSSION

Vitreomacular traction syndrome (VTS) is a disorder caused by incomplete detachment or separation of the posterior vitreous with persistent macular traction or adhesions causing decreased visual acuity, metamorphopsia, monocular diplopia, and micropsia.² VTS is frequently accompanied by cystoid macular edema,

although in rare cases spontaneous resolution of VTS improves VA.^{1,2} Levy and Gallemore^{3,4} reported a case of VTS without macular cysts that resolved 6 weeks after presentation. Kusaka et al.,⁵ also reported a case of VTS with macular cystic spaces that spontaneously resolved after 8 months. Hikici et al.,⁶ described in their series that 11% of patients with VTS developed complete posterior vitreous detachment after an average time 15 months (range, 6-32 months). Ito et al.,⁷ reported that vitrectomy is required for progressive visual impairment with VTS cases and they documented anatomical improvement by OCT. In our case, SD-OCT detected an incomplete PVD and multiple cystic spaces with increased macular thickness. The patient's VA had improved to 20/20 in the left eye and SD-OCT revealed resolution of macular cysts and macular traction, 4 weeks after the initial symptoms. Spontaneous resolution of VTS and macular cysts confirmed by SD-OCT was earlier than the cases reported in the literature. As a diagnostic tool, SD-OCT is a safe, noninvasive technique and is especially superior to the other methods in terms of assessing structural changes at the macula. In conclusion, there are few reports of early spontaneous resolution of VTS, and SD-OCT should be performed in the initial evaluation and particularly before surgery.

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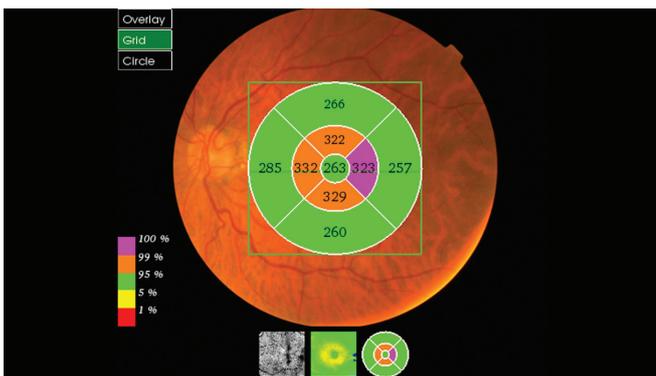


Figure 2: Repeat SD-OCT showed reduced retinal thickness (263 μm) at the macula center.