# BILATERAL OPTIC DISC HEAD DRUSEN MANIFESTING AS UNILATERAL EPISODIC VISUAL FIELD OBSCURATION: A CASE REPORT

TEK TARAFLI, EPİZODİK GÖRME ALANI DEFEKTİ İLE KENDİNİ GÖSTEREN BİLATERAL OPTİK SİNİR BAŞI DRUZENİ: OLGU SUNUMU

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SUMMARY: Optic nerve head drusen (ONHD) are formed within the substance of the optic disc due to the accumulation of calcified hyaline-like material. They are generally misdiagnosed as papilledema since they elevate the disc and blur the disc margins. In this report, we describe a 22-year-old female patient with unilateral, episodic, partial visual field obscuration diagnosed as bilateral ONHD, the and pathogenesis, diagnosis and possible complications of disc drusen are discussed.

**Key Words:** Optic Nerve Head Drusen, Visual Field Defect, Pseudopapilledema.

## INTRODUCTION

Optic nerve head drusen (ONHD) are the accumulations of calcified hyaline-like material within the substance of the optic nerve head (1). They are also called hyaline or colloid bodies. Since ONHD cause irregular elevation of the optic disc and blur its margins, it should be evaluated in the differential diagnosis of papilledema (2). In fact, these lesions commonly present as pseudopapilledema.

Herein, we report a case of unilateral, episodic, partial visual field obscuration diagnosed as bilateral ONHD.

# **CASE REPORT**

Our patient was a 22-year-old female with a one-year history of transient shadowing at the lower part of her right visual field. These episodic

ÖZET: Optik sinir başı druzeni (OSBD), optik diskte kalsifiye, hyalen benzeri bir materyalin birikmesi sonucu oluşur. Optik disk elevasyonu ve disk sınırlarında silikliğe neden oldukları için genellikle yanlış olarak papilödem teşhisi konulur. Bu yazıda, tek taraflı, epizodik, parsiyel görme alanı bulanıklığı şikayeti ile başvuran ve bilateral OSBD tespit edilen 22 yaşındaki kadın hasta sunulmuştur. Disk druzeninin patogenezi, tanısı ve olası komplikasyonları tartışılmıştır.

Anahtar Kelimeler: Optik Sinir Başı Druzeni, Görme Alanı Defekti, Psödopapilödem.

visual field obscurations appeared 5-6 times a day and lasted for seconds. No headache accompanied these events. From her history, it was learned that a prior ophthalmological examination at another center revealed no abnormalities and a neurological examination was suggested. Her neurological examination performed at our Neurology Department was within normal limits except for the appearance of the optic discs. Since a detailed history and a diagnostic work-up including cranial magnetic resonance imaging revealed no abnormality, a repeat ophthalmological evaluation including perimetry was warranted. In ophthalmological examination performed at our department, vision was 20/20 bilaterally, and anterior segments and intraocular pressures were normal. A fundus examination revealed irregularly elevated discs and nodular, glistening

structures within the optic nerve head bilaterally (Fig. 1). Autofluorescence of these lesions was noted with a fundus camera. Hence, the patient was diagnosed with bilateral ONHD. An automatized visual field examination (Humphrey, central 30-2 threshold test) demonstrated a visual field defect in the lower quadrant of the right eye consistent with the localization of her complaint (Fig. 2). The visual field of the left eye was normal.



Fig. 1: Optic nerve head drusen in the left eye of the patient.

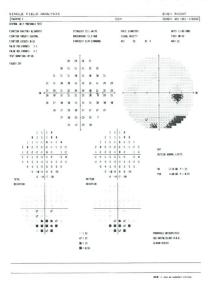


Fig. 2: Visual field defect in the inferior quadrant of the right eye.

## DISCUSSION

ONHD may be misdiagnosed as papilledema. However, the fundus findings of drusen are

different than those of genuine papilledema. In drusen, spontaneous venous pulsations are preserved, the optic disc is not hyperemic, and no hemorrhages, exudates, or peripapillary retinal folds are present. No fluorescein leakage is observed in fundus fluorescein angiography (2). Patients with papilledema may also experience transient visual obscurations; however, fundus findings, associated symptoms such as headache and nausea/vomiting, central nervous system imaging and determination of increased intracranial pressure help us to differentiate the cases of papilledema from pseudopapilledema like ONHD.

ONHD are generally asymptomatic. In rare cases, ischemic optic neuropathy, peripapillary hemorrhage and choroidal neovascularization may cause visual loss (2). On the other hand, a major proportion of patients develop visual field defects, possibly due to nerve fiber atrophy secondary to the compression of drusen (3). Visual field defects have been found in 71% of eyes with visible ONHD and enlargement of the blind spot, nerve fiber bundle defects, particularly involving the inferior field, and concentric narrowing were the most common defects (4). Sudden onset of field defects was also reported in patients with ONHD, probably of vascular origin (5). Our patient also had a visual field defect. However, the interesting point in our case was that the patient described her complaint as an episodic, transient event occurring frequently rather than a constant defect. Therefore, initially, she was thought to have transient visual loss. However, her history, neurological examination and radiological evaluation were normal except for optic disc drusen. The explanation for the intermittent perception of the visual field defect probably lies in her profession. She is a translator and she particularly notices the visual field defect at work while looking at a big screen carefully and uses all of her visual fields.

In conclusion, even though a patient describes some kind of episodic visual disorder, he or she may have a constant field defect and harbor an organic ocular pathology, like ONHD, especially in the absence of a neurological disease. Drusen may be diagnosed with a detailed ophthalmological examination. Patients with ONHD should be followed up for possible

complications, particularly visual field defects.

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