

Optical coherence tomography findings in a case of bilateral diffuse uveal melanocytic proliferation

Ryota Takahashi¹, Shinji Makino¹

¹Department of Ophthalmology, Jichi Medical University, Shimotsuke, Tochigi 329-0498, Japan

*Corresponding author

Shinji Makino

Email: makichan@jichi.ac.jp

Abstract: We present the case of bilateral diffuse uveal melanocytic proliferation (BDUMP) in a 74-year-old man. The patient was referred for unexplained rapidly progressive bilateral visual loss associated with ocular fundus changes. His visual acuity at the first visit was 0.01 in the right eye and 0.02 in the left eye. Fundoscopic examination revealed bilateral irregular and discolored lesions. Fluorescein angiography demonstrated the characteristic mosaic with hyperfluorescent patches. Optical coherence tomography (OCT) revealed widespread disruption of the ellipsoid zone and multiple deposits of an abnormal, highly reflective, confluent material within the subretinal space. Following extensive examinations, a diagnosis of squamous cell lung carcinoma was made in the patient. Our findings suggest that OCT is valuable in the diagnosis of BDUMP.

Keywords: Bilateral diffuse uveal melanocytic proliferation, optical coherence tomography.

INTRODUCTION

Bilateral diffuse uveal melanocytic proliferation (BDUMP) is a rare paraneoplastic disorder characterized by bilateral serous retinal detachment (SRD) with degeneration of the retinal pigment epithelium (RPE) [1-5]. The condition commonly occurs in women with gynecological carcinoma or men with lung malignancy, although several other cancer types have been described. Furthermore, the condition may occur as the first sign of a yet undiscovered malignancy. Several authors have reported optical coherence tomography (OCT) findings in BDUMP [6-14]. Herein, we report on the OCT findings in an elderly male patient with BDUMP.

CASE REPORT

A 74-year-old man was referred for unexplained rapidly progressive 3-month-old bilateral visual loss, associated with ocular fundus changes. Three months prior to the initial visit, his best-corrected visual acuity (BCVA) was 1.0 in the right eye and 0.9 in the left eye. At 1 month before the initial visit, BCVA was 0.3 in the right eye and 0.08 in the left eye. At the initial visit, BCVA was 0.01 in the right eye and 0.02 in the left eye. Slit lamp examination showed cortical and nuclear opacities in both lenses. Fundus photographs showed bilateral irregular and discolored lesions at the level of the RPE; however, details were unclear due to the presence of cataract (Figure 1A, B).

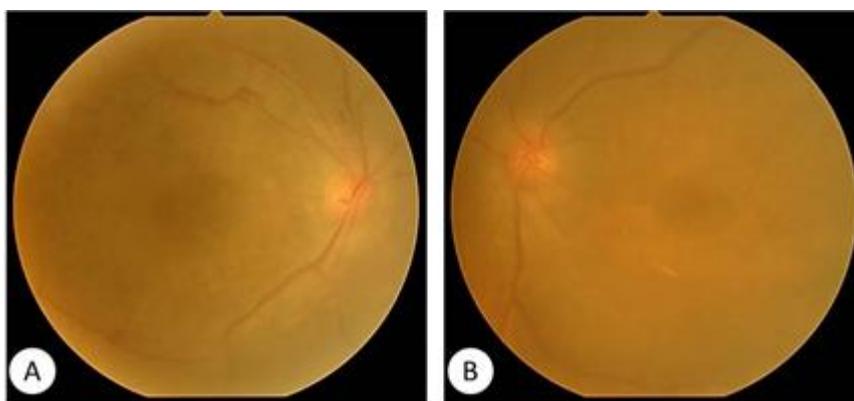


Fig-1: Fundus photographs of the right (A) and left (B) eye

Fluorescein angiography demonstrated the characteristic mosaic with hyperfluorescent patches and late leakage (Figure 2A-D).

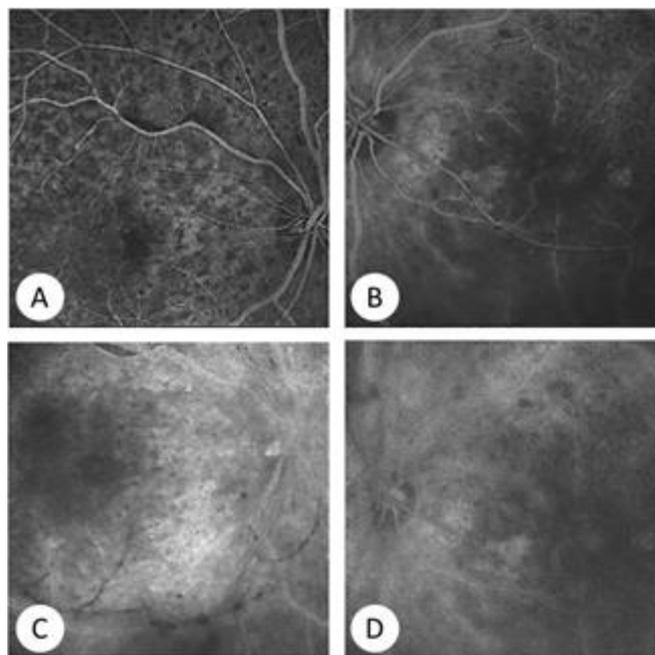


Fig-2: Fluorescein angiography of the right (A, C) and left (B, D) eye

Moreover, OCT revealed a widespread disruption of the ellipsoid zone with a shallow serous retinal detachment (Figure 3A–D, framed arrows). In addition, multiple deposits of an abnormal, highly

reflective, confluent material were observed within the subretinal space (Figure 3A–D, filled arrows). Furthermore, multiple hyperreflective spots were observed in the choroid.

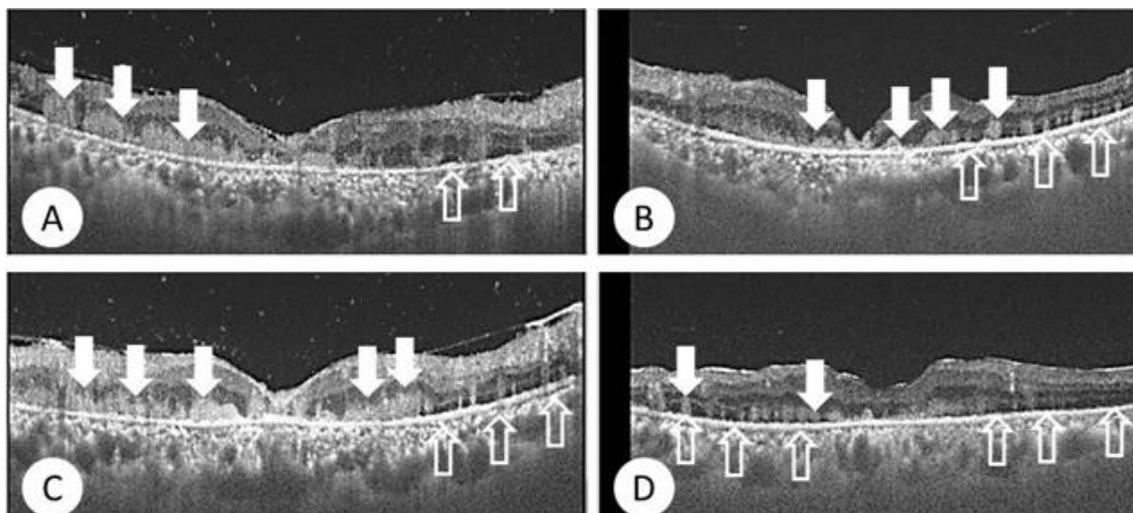


Fig-3: Optical coherence tomography images of the right (A, C) and left (B, D) eye (A, B: horizontal direction; C, D: vertical direction).

It shows the widespread disruption of the ellipsoid zone with shallow retinal detachment (framed arrows) and multiple deposits within the subretinal space (filled arrows).

Based on the patient’s history and the aforementioned examinations, a tentative diagnosis of BDUMP was made. After extensive examination at the referral hospital, a diagnosis of squamous cell lung carcinoma was made.

DISCUSSION

Diagnosis of BDUMP is difficult, especially because a history of malignancy is often absent. Gass *et al.* [2]. have described the five cardinal signs of BDUMP: 1) multiple, subtle, round, and orange-red subretinal patches on the fundus photograph; 2) multifocal early hyperfluorescence of these patches revealed by fluorescein angiography; 3) focally elevated pigmented and non-pigmented uveal melanocytic tumors with diffuse choroidal thickening; 4) exudative retinal detachments; and 5) rapidly progressive cataract formation. In the case described here, the patient’s

history and specific ocular changes were identified before the diagnosis of the primary tumor was made.

Recently, three cases have been reported describing a variant of BDUMP in which the most prominent feature was RPE [12-14]. They were named “cancer-associated nummular loss of RPE” and had all of the features of BDUMP except for the presence of multiple uveal melanocytic lesions and cataracts [12, 13]. Our OCT findings revealed a complete RPE loss alternating with areas of thickened RPE. We speculate that the present case may be reminiscent of the cancer-associated nummular loss of RPE rather than the classical BDUMP.

Finally, we consider that OCT will help in the early diagnosis of BDUMP, which may help retain the eyesight and prove to be lifesaving.

Disclosure

No conflicts of interest are declared in relation to this paper.

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