Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com/journal/sjmcr/home

OPEN ACCESS

A Rare and Unusual Association between Serous Retinal Detachment and Acute Zonal Occult Outer Retinopathy in a Puerperal Woman

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| **Received:** 05.01.2019 | **Accepted:** 16.01.2019 | **Published:** 23.01.2019
DOI: 10.36347/sjmcr.2019.v07i01.013

Abstract **Case Report**

We present a case of serous retinal detachment (SRD) and acute zonal occult outer retinopathy (AZOOR) in a 25-year-old postpartum woman with preeclampsia. She complained of visual disturbance on day 1 post-partum. Fundus examination revealed SRD in both eyes. Optical coherence tomography showed attenuation of the photoreceptor inner segment/outer segment line in both eyes. The coexistence of SRD and AZOOR in a puerperal woman is extremely rare. This present case highlights the importance for clinicians to be aware of the diagnosis of concomitant SRD and AZOOR.

Keywords: pregnancy, preeclampsia, serous retinal detachment, acute zonal occult outer retinopathy, optical coherence tomography.

INTRODUCTION

Serous retinal detachment (SRD) is sometimes caused by hypertensive disorders in pregnancy and its associated conditions, in which the predominant eye symptoms are blurred vision, distorted vision, and reduced visual acuity [1-10]. Acute zonal occult outer retinopathy (AZOOR) is characterized by an acute zonal loss of outer retinal function involving one or both eyes. AZOOR occurs predominantly in young women. Initially, minimal or no fundus changes occur, but enlarged blind spots, abnormalities on electroretinograms (ERG) and permanent visual field loss often occur in this slowly progressing form of retinal pigment epithelium degeneration [11-14]. Optical coherence tomography (OCT) images from eyes with AZOOR show a loss or irregularity of the photoreceptor inner segment/outer segment (IS/OS) line in areas corresponding to reduced multifocal ERG responses and visual field defects [11-14]. Herein, we report a case of SRD and AZOOR in a 25-year-old postpartum woman.

CASE REPORT

A 25-year-old pregnant woman was transferred to previous hospital. At admission to this institute, she was alert, with a blood pressure of 166/118 mmHg and proteinuria (spot urine dipstick [4+]). On diagnosing this condition as preeclampsia, she was immediately performed cesarean section. On day 1 post-partum, she complained of distorted vision. On ophthalmic examination, best corrected visual acuity (BCVA) was 0.1 and 0.15 in right and left eyes, respectively. Fundus examination revealed numerous white spots in deeper retinal layer and SRD around the disc and posterior fundus in both eyes. Optical coherence tomography (OCT) confirmed marked SRD in both eyes. Fluorescein angiography revealed multiple points of hyperfluorescence with dye leakage into the subretinal space. The findings of numerous white spots in deeper retinal layer were suggestive of hypertensive choroidopathy. Although the patient's blood pressure gradually began to decline once she started taking the medications, with her SRD also gradually resolving, her BCVA was not improved. Furthermore, an absent photoreceptor inner segment/outer segment (IS/OS) line was detected examined by OCT in both eyes.

She was referred to our hospital due to persistent visual disturbance. At her initial examination, BCVA was 0.07 and 0.1 in right and left eyes, respectively. Fundus examination revealed discoloration around the disc and posterior fundus in both eyes.

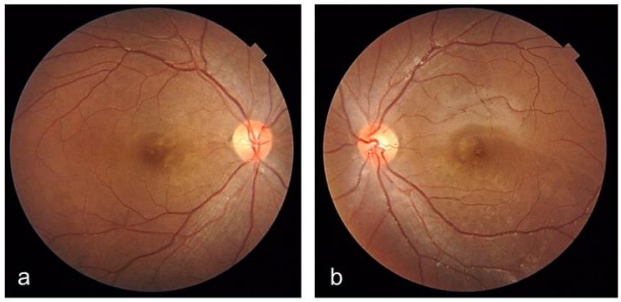

Fig-1: Fundus photographs of the (a) right and (b) left eyes

Note discoloration around the disc and posterior fundus in both eyes. On OCT revealed there was no recovery of the IS/OS discontinuation at the foveal area.

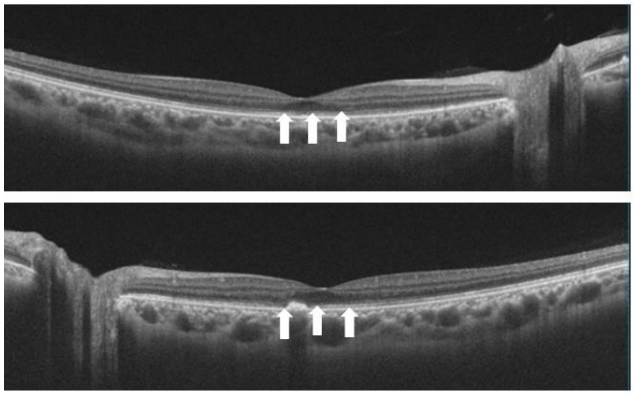

Fig-2: Optical coherence tomography images of the (a) right and (b) left eyes

OCT show an absent photoreceptor inner segment/outer segment line in both eyes (arrows). Based on these previous history and OCT findings, a diagnosis of the coexistence of SRD and AZOOR was considered. After 4 weeks, BCVA improved to 0.3 in both eyes. Fluorescein angiography and multifocal ERG were not available in this case.

Discussion

This case report provides details on a female patient with preeclampsia who developed bilateral SRD and AZOOR.

Parks *et al*. [8] evaluated clinical features of patients with retinal and choroidal diseases presenting with acute visual disturbance during pregnancy. According to their report, acute visual loss occurred in 147 patients; 49 (38.9%) were classified into the retinal and choroidal group. The diagnoses included central serous chorioretinopathy (22.4%), hypertensive retinopathy with or without pre-eclampsia (22.4%), and retinal tear with or without retinal detachment (18.4%), diabetic retinopathy progression (10.2%), Vogt-Koyanagi-Harada disease (4.1%), retinal artery occlusion (4.1%), multiple evanescent white dot syndromes (4.1%), and others (14.3%). Others include the following: retinal artery occlusion, punctate inner choroidopathy with choroidal neovascularization, activation of previous tuberculosis granuloma, acute zonal occult outer retinopathy, and central retinal vein occlusion, idiopathic choroidal neovascular membrane with choroiditis, macular subretinal hemorrhage, and retinoschisis. Therefore, the coexistence of SRD and AZOOR in a puerperal woman is extremely rare. To our best knowledge, this is the first report describing a post-partum woman with SRD and AZOOR.

Conclusions

This present case highlights the importance for clinicians to be aware of the diagnosis of concomitant SRD and AZOOR. When a pregnant woman visits for acute visual loss, the clinicians should evaluate the patient with suspicion of retinal and choroidal diseases.

Disclosure

The authors have no conflicts of interest to disclose.

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