Bilateral Central Serous Chorioretinopathy in a Patient Treated with Systemic Cortico-Steroids For Retrobulbar Neuritis

Retrobulber Nörit Tedavisi İçin Sistemik Steroid Kullanan Hastada Gelişen İki Tarafı Santral Seröz Koryoretinopati

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Case Report *Olgu Sunumu*

ABSTRACT

A 46 year-old man presented with a complaint of vision loss and relative nasal scotoma in the left eye after systemic steroid use for retrobulbar neuritis. Fundus examination revealed bilateral multiple foci of serous retinal detachment at the posterior pole. Fluorescein angiography (FA) revealed multiple foci of pigment epithelial leaks, some of which corresponded to serous detachment areas. With diagnosis of atypical central serous chorioretinopathy, steroid was discontinued and the leaking points were treated with focal argon laser photocoagulation. Vision improved rapidly with resolution of subretinal fluid after laser treatment. Laser photocoagulation for atypical central serous chorioretinopathy is a good option when a rapid restoration of vision is needed.

Key Words: Atypical central serous chorioretinopathy, argon laser photocoagulation, systemic steroid.

ÖZ

Retrobulber nörit tanısıyla sistemik steroid tedavisi alan 46 yaşındaki erkek hasta, sol gözünde görme kaybı ve nazal skotom şikayetleriyle kliniğimize başvurdu. Fundus muayenesinde, her iki gözün arka kutbunda çok sayıda seröz retina dekolmanı alanları izlendi. Floresan anjiografide seröz dekolman alanlarına karşılık gelen pigment epitel sızıntı odakları görüldü. Atipik santral seröz koryoretinopati tanısıyla, steroid tedavisi kesilip, sızıntı odaklarına argon lazer tedavisi uygulandı. Tedavi sonrası retina altı sıvı kaybolup hastanın görmesi hızla düzeldi. Santral seröz koryoretinopati tedavisinde, hızlı görsel iyileşmenin arzulandığı durumlarda lazer fotokoagülasyon tedavisi iyi bir seçenektir.

Anahtar Kelimeler: Atipik santral seröz koryoretinopati, argon lazer tedavisi, sistemik steroid.

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INTRODUCTION

Central serous chorioretinopathy (CSR) is a localized serous detachment of neurosensory retina in the posterior pole. The typical clinical picture is that of a male aged 20-50 years, presenting with metamorphopsia, micropsia and a central scotoma.[1] Predisposing factors recognized to be associated with CSR include corticosteroid use, psychological stress, pregnancy, and increased activity of symphatoadrenal system, type-A personality, organ transplantation, and male gender.[2] Corticosteroid use, through a variety of routes, including systemic, inhaled, epidural and intranasal administration, has been recognized in a causal relation with CSR since 1984.[1-5] CSR associated with corticosteroid use has some atypical features, such as diffuse pigment epithelial leaks, bilateral involvement, age variability and unusually severe course.[1-6]

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CASE REPORT

A 46 year-old man presented with complaints of vision loss and relative nasal scotoma in the left eye that had progressed centrally for the last few days. He described circular-shaped relative scotomas in the right eye. History of the patient revealed a course of pulse steroid therapy for presumed retrobulbar neuritis in the right eye one month before seen in our retina clinic and he was on oral prednisolone therapy. He had no history of systemic disease.

Visual acuities were 20/20 in the right and 20/200 in the left eye. Pupillary light reflexes were normal bilaterally. Fundus examination revealed bilateral multiple foci of serous retinal detachment at the posterior pole (along the superior and inferior arcades and peripapillary area), which also involved the fovea in the left eye (Figure 1). There was no associated vitritis. On fluorescein angiography (FA), multiple foci of pigment epithelial leaks, some of which corresponded to serous detachment areas, were observed (Figure 2). Areas of pigment epithelial leaks showed late hyperfluorescence on indocyanin green angiography. B-mode ultrasonography revealed small localized multiple serous retinal detachments bilaterally. Perimetric examination confirmed relative scotomas corresponding to retinal detachment areas in both eyes. Systemic examination and routine laboratory examinations were all within normal limits.

We thought that the most probable diagnosis was steroid-induced CSR. Steroid therapy was ceased and argon laser photocoagulation was applied to the leaking points, which were associated with serous detachment areas. Serous retinal detachment areas completely resolved bilaterally and visual acuity improved to 20/20 in the left eye within 20 days. The patient pointed out disappearance of the relative scotomas, which was confirmed with perimetric examination. Three months later, FFA revealed hypofluorescent laser scars and a few areas of window defects bilaterally (Figure 3). The patient has been under observation for the last 7 months without any recurrence.

DISCUSSION

Beside cataract and glaucoma, corticosteroids may cause CSR, which was recently reported to be responsible for more than 50% of the CSR cases.[7, 8] Precise mechanism of CSR development due to steroid therapy is unknown. Proposed pathophysiological path include

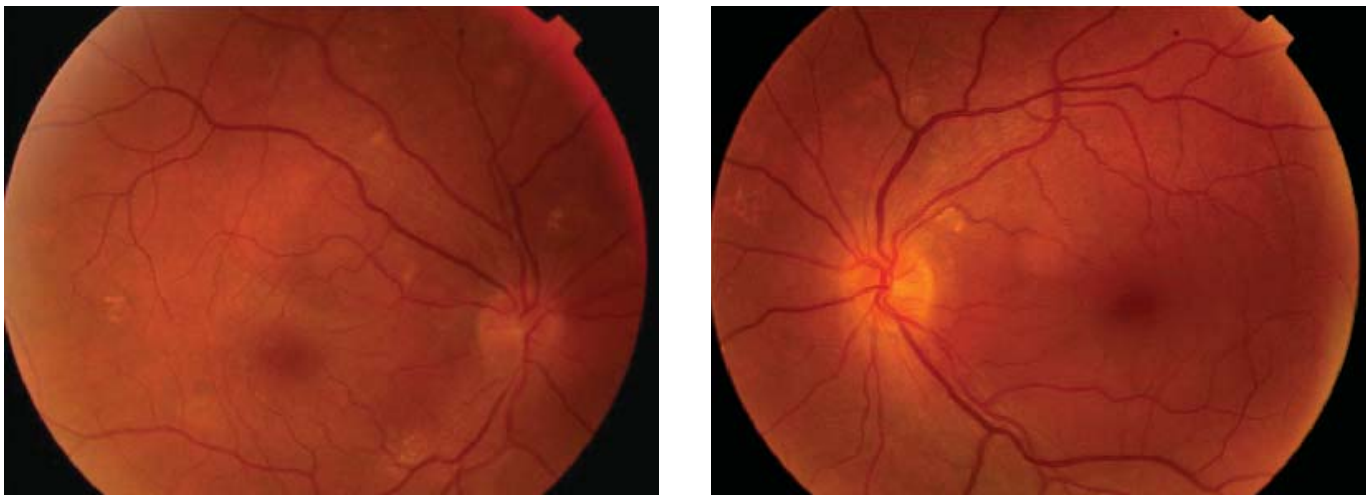

Figure 1: Bilateral fundus photography showing bilateral serous detachment areas.

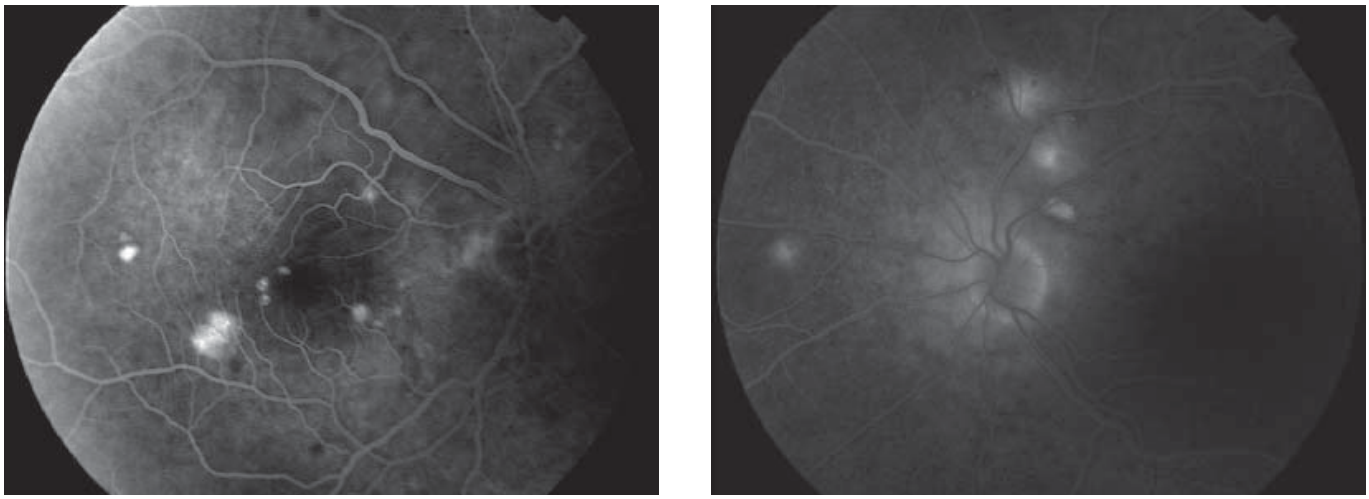

Figure 2: Late phase fluorescein angiography of the right and left eyes at presentation.

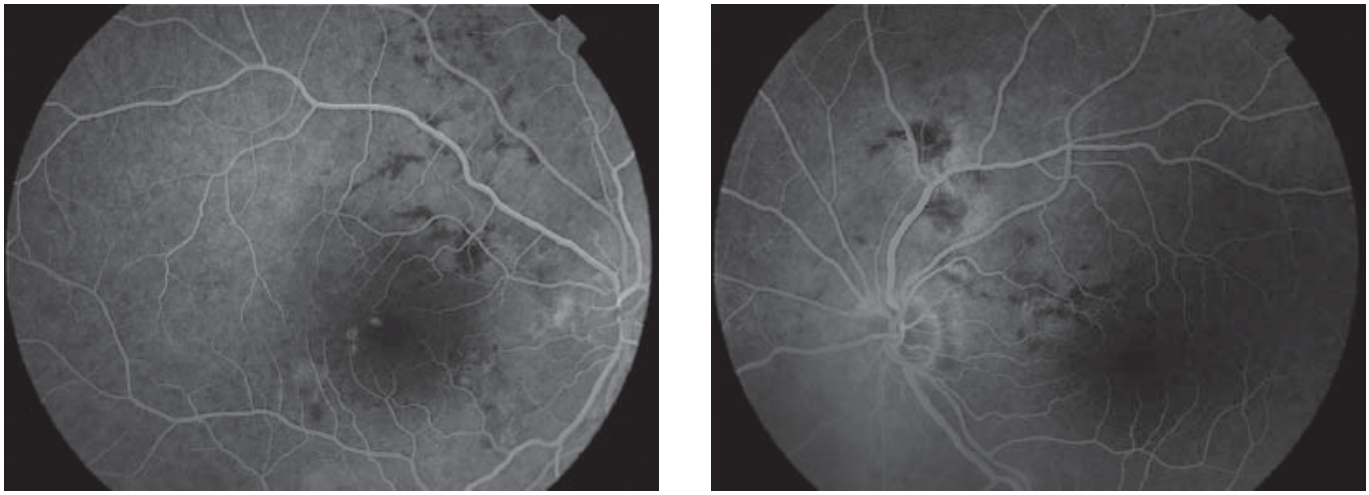

Figure 3: Late phase fluorescein angiography of the right and left eye 20 days after laser photocoagulation.

steroid-induced effect on choroidal circulation that involve the release of catecholamines and an increase in the sensitivity of adrenergic receptors.[3,9] The primary change caused by central serous chorioretinopathy is thought to occur in the choroid, followed by the breakdown of the outer blood-retinal barrier in the pigment epithelium, resulting in the development of serous retinal detachment.[10]

Diagnosis of such an atypical case is not readily prominent. Some inflammatory entities, which cause sensory-neural detachment including Vogt-Koyanagi-Harada's (VKH) disease and posterior scleritis should also be considered in the differential diagnosis. Bilateral sensory-neural detachments together with multiple punctate hyperfluorescent dots at the level of RPE could also be demonstrated in the acute stage of VKH. Absence of any inflammatory sign, choroidal thickening and systemic manifestations of VKH helped in the exclusion of VKH disease. Indocyanine green angiographic finding of the late hyperfluorescence is typical of CSR, in contrast to hypofluorescent dark dots during the intermediate phase of angiography in VKH. The posterior scleritis could also present with subretinal fluid in macula and fluorescein angiography of many leaking spots. In our patient, bilateral involvement, lack of choroidal thickening on ultrasonography and lack of any inflammatory characters and pain lead to exclusion of posterior scleritis.

Treatment is not considered in most cases of CSR since the majority of patients with CSR have complete spontaneous resolution of subretinal fluid with a good recovery of visual acuity. But for the patients with bilateral involvement, recurrent disease, occupational considerations, lack of improvement in 3 months period, laser therapy may be considered.[1] In addition, CSR due to steroid therapy may follow a protracted course with a more severe clinical picture.[4] Cessation of steroid therapy itself may result in resolution of the disease in some cases.[4,5] Bilateral ocular involvement with deep visual loss in the left eye and occupational problems of the patient directed us to apply focal laser photocoagulation therapy which resulted in rapid resolution of the subretinal fluid with visual acuity improvement.

A previous report of two cases with retrobulbar neuritis in one eye treated with systemic steroids had a similar fate like our case.[5] This side effect of corticosteroids should be kept in mind when an unexpected clinical and angiographic evolution compatible with CSC develops in an optic neuritis patient treated with corticosteroids.

In conclusion, corticosteroid may cause CSR, which may be atypical in clinical presentation, leading to diagnostic difficulties. Laser photocoagulation for atypical central serous chorioretinopathy is a good option when a rapid restoration of vision is needed.

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