Chronic Tubulointerstitial Nephritis Associated with Multiple Retinal Pigment Epithelial Detachment: Case Report

Kronik Tübülointerstisyel Nefritte Çoklu Retina Pigment Epiteli Dekolmanı

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ABSTRACT A 34 year-old man presented with the complaint of decreased vision in both eyes. Fundus examination showed bilateral multiple retinal pigment epithelial detachments (PEDs). His blood urea and creatinine levels were found to be high and he underwent a renal biopsy. He was found to have chronic tubulointerstitial nephritis and underwent a kidney transplant operation. Multiple retinal PEDs are very rare conditions that are associated with systemic diseases. Patients with PEDs should also be evaluated in terms of systemic diseases, and appropriate treatment should be planned according to the underlying diseases.

Key Words: Retinal detachment; nephritis, interstitial; kidney transplantation

ÖZET Otuz dört yaşında erkek hasta bulanık görme şikayeti ile kliniğimize başvurdu. Göz dibi muayenesinde bilateral birden çok retina pigment epiteli dekolmanı (PED) olduğu tespit edildi. Hastanın kan üre ve kreatinin değerleri yüksek bulunduğu için böbrek biyopsisi uygulandı. Biyopsi sonucunda kronik tübülointerstisyal nefrit tanısı konuldu ve hastaya böbrek nakli yapıldı. Çoklu retina PED'leri nadir görülürler ve sistemik hastalıklarla birliktelikleri olabilmektedir. Bu nedenle retina PED'leri bulunan hastalar sistemik hastalıklar yönünden de değerlendirilmeli ve eğer varsa altta yatan hastalık tedavi edilmelidir.

Anahtar Kelimeler: Retina dekolmanı; nefrit, interstisyel; böbrek transplantasyonu

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Retinal pigment epithelial detachments (PEDs), in which the integrity between the retinal pigment epithelium and Bruch's membrane is lost, may be associated with many ocular and systemic disorders.[1] In some cases, serous detachment may start from the site of a pre-existing retinal PED.

CASE PRESENTATION

A 34 year-old man was admitted to our clinic complaining of decreased vision in the left eye. His visual acuities were 7/10 bilaterally. Fundus examination showed bilateral retinal multiple PEDs (Figure 1A, B, C). Fundus fluorescein angiography of both eyes showing leakage in the PED area (Figure 1D, E).

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He was referred to the internal medicine department and diagnosed with systemic hypertension. In the follow-up, the PEDs were regressed and scar formations were observed.

Two years later, he was readmitted complaining of decreased vision in the right eye. His visual acuity was 3/10 in the right eye and 10/10 in the left. Exudative retinal detachment was observed in the right eye and lower retinal quadrant (Figure 2A, B). He again consulted the internal medicine department. His urea and creatinine levels were found to be high and he had proteinuria. Plasma protein levels were normal. The internal medicine department decided on a kidney biopsy. As a result of the biopsy, he was diagnosed with chronic tubulointerstitial nephritis. He underwent a kidney transplant operation. After the transplantation, he did not continue his follow-ups.

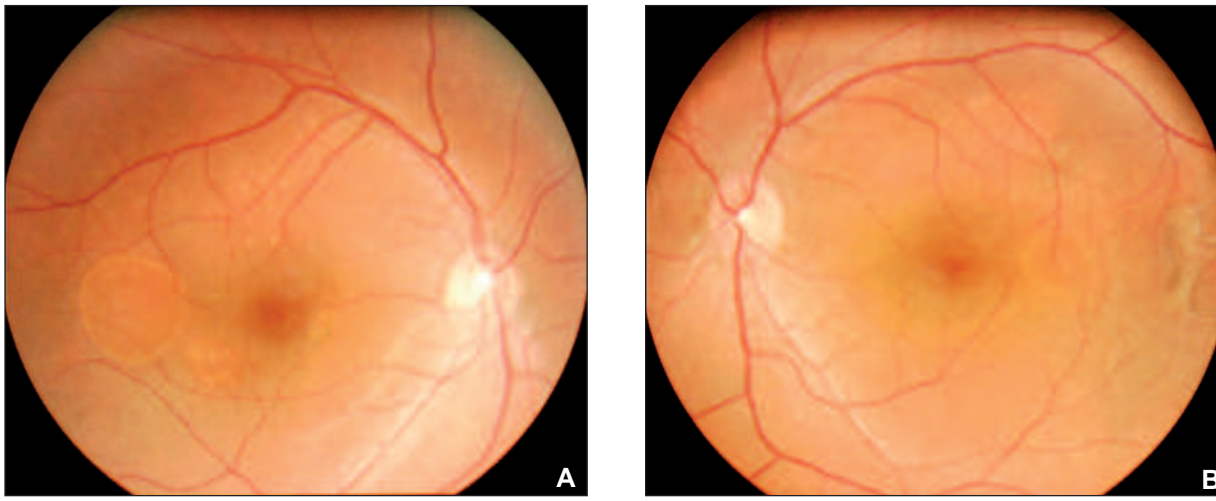

FIGURE 1: A (right eye), **B** (left eye): Fundus photographs of both eyes showing multiple PEDs.

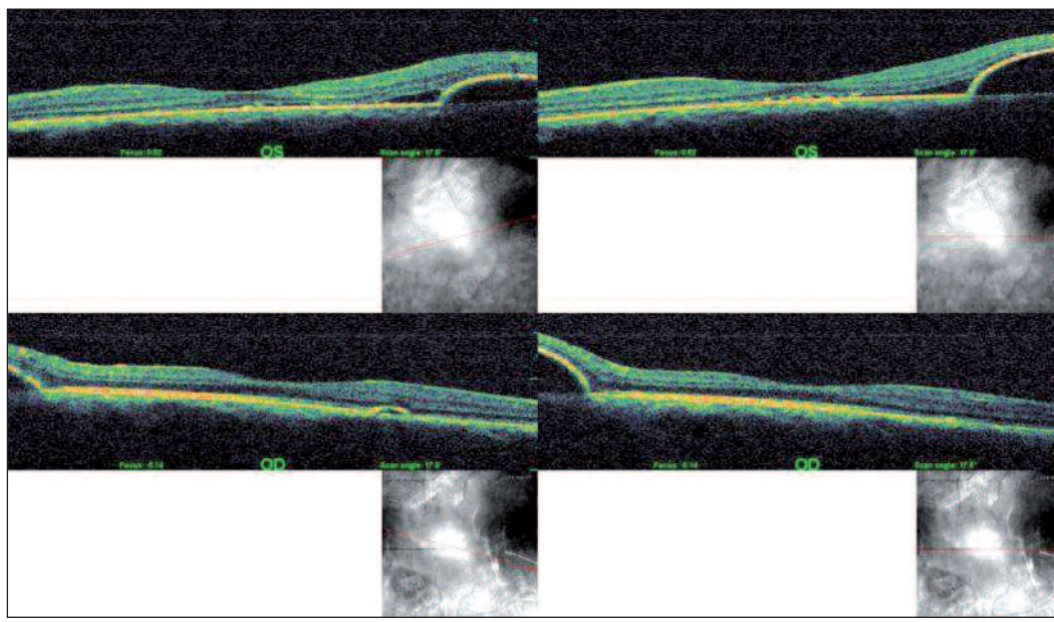

FIGURE 1C: PEDs are identified on optical coherence tomography (OCT) imaging in the right and left eye.

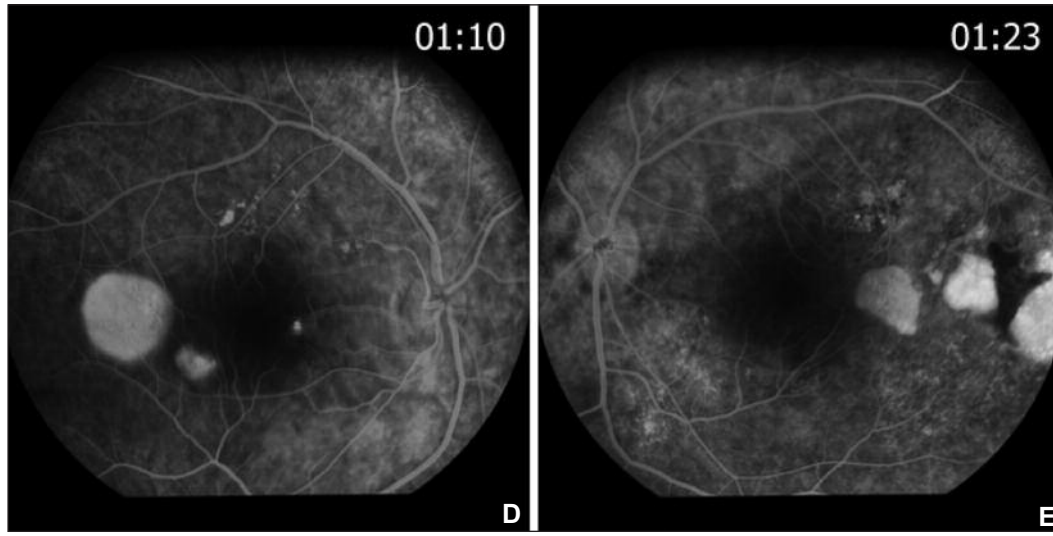

FIGURE 1: D (right eye), **E** (left eye): Fundus fluorescein angiography of both eyes showing leakage in the PEDs area.

DISCUSSION

Many ocular disorders such as age-related macular degeneration (primarily), systemic disorders (inflammatory, infectious, neoplastic) and iatrogenic conditions are associated with PEDs.[2] Retinal PED is generally seen as a discrete finding, but sometimes it may be associated with serous detachments. In some cases, serous detachment may start from the site of a pre-existing PED.[1] Numerous systemic diseases can alter choroidal vascular perfusion and permeability causing serous retinal elevation by diverse mechanisms. Recent diagnostic instruments such as optical coherence tomography (OCT) can make it possible to diagnose subclinical cases.[3] The treatment of serous retinal detachment is based on the underlying systemic disease.

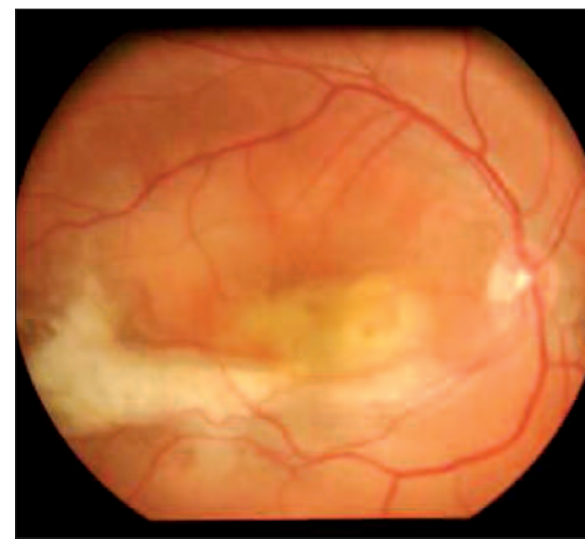

FIGURE 2A: Fundus photographs showing serous retinal detachment in the right eye.

There are some patients with renal disease associated with retinal PEDs in the literature.[4,5] Tubulointerstitial nephritis (TINU) and uveitis syndrome are generally associated with anterior uveitis. In rare cases, TINU can be associated with posterior uveitis and pigment epithelium detachments.[6] Unlike our case, there was no evidence of anterior or posterior uveitis. On the other hand, ocular tissues might have been the target of idiopathic inflammation in TINU syndrome and thus the presence of uveitis would be explained.

We could find no patient whose complaints started with retinal PEDs then developed serous retinal detachment associated chronic tubulointerstitial nephritis. In this aspect, to the best of our knowledge, our case is the first in the literature.

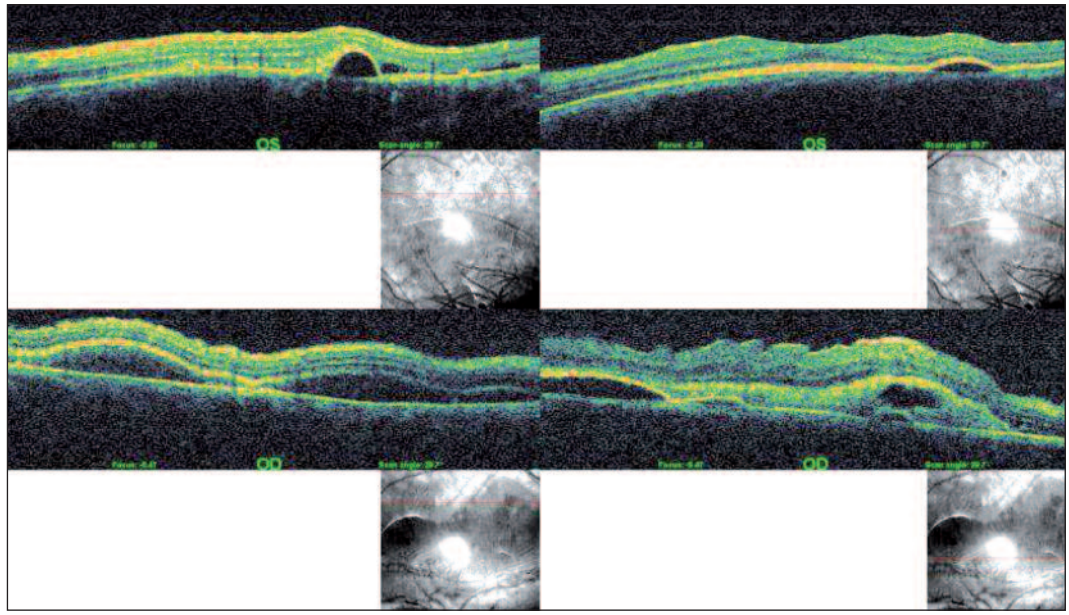

FIGURE 2B: OCT demonstrated serous retinal detachment in the right eye and PEDs in the left eye.

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