TREATMENT OF TWO CASES OF DIFFUSE RETINAL PIGMENT EPITHELIOPATHY WITH PHOTODYNAMIC THERAPY

TRATAMIENTO CON TERAPIA FOTODINÁMICA DE DOS CASOS DE EPITELIOPATÍA PIGMENTARIA RETINIANA DIFUSA

ARMADÁ F¹, ROMERO R², ORTEGA I², FONSECA A²

ABSTRACT

Case report: We present two patients with Diffuse Retinal Pigment Epitheliopathy (DRPE) treated with verteporfin photodynamic therapy (PDT). The first patient was treated with PDT because there was foveal involvement. The second patient received PDT because he had multiple recurrences of DRPE with poor resolution following previous argon-laser photocoagulation. Resolution of the lesions occurred in both cases with improvement in visual acuity. No recurrences have been documented at eleven months of follow-up.

Discussion: The outcomes in our patients were satisfactory. We consider PDT is a safe and effective option, but further randomized studies are necessary to confirm this (Arch Soc Esp Oftalmol 2006; 81: 603-606).

Key words: Diffuse retinal pigment epitheliopathy, photodynamic therapy, verteporfin, central serous chorioretinopathy, multifocal exudative lesions.

RESUMEN

Caso clínico: Presentamos dos pacientes con epite- liopatía pigmentaria retiniana difusa (EPRD) trata- dos mediante terapia fotodinámica (TFD) con ver- teporfina.

La primera paciente fue tratada con TFD por tener afectación foveal. El segundo paciente recibió TFD por presentar EPRD recidivante con mala evolución a pesar de fotocoagulación con láser argón.

En ambos casos se resolvieron las lesiones y mejo- ró la agudeza visual. Tras once meses de seguimien- to no se han producido recidivas.

Discusión: Los resultados obtenidos en nuestros pacientes con TFD son satisfactorios. Considera- mos que es una opción terapéutica segura y eficaz, aunque son necesarios estudios aleatorizados a lar- go plazo.

Palabras clave: Epiteliopatía pigmentaria retiniana difusa, terapia fotodinámica, verteporfina, coriorre- tinopatía serosa central, lesiones exudativas multi- focales.
INTRODUCTION

Diffuse pigment retinal epitheliopathy (DPRE) was described in the early seventies (1). It is considered to be a non-typical and severe variant of central serous chorioretinopathy (CSC), characterized by multifocal exudative lesions in the posterior pole (the predominant location being superior temporal parapapillar), atrophied tracts of the retinal pigment epithelium (RPE) extending towards the inferior periphery, and peripheral non-regmatogenous retinal detachments in more severe cases (2).

The etiology of DPRE is not known. Data obtained from green indocyanine angiographies show that the primary development is choroidal hyperpermeability, with secondary involvement of the RPE (3).

We present two DPRE patients treated with Photodynamic Therapy (PDT) with verteporfin. We made a reference search in Medline and found a single published case of DPRE treated with PDT (4).

CASE REPORTS

A 49 year-old woman who visited the practice due to VA reduction in her left eye (LE) beginning two weeks before. She did not exhibit systemic or ophthalmological history of interest. Corrected visual acuity (cVA) was of 1 in the right eye (RE) and of 0,3 in the LE. The anterior pole of both eyes (BE) was normal. No alterations were found in the RE retina. The eye fundus exploration of the LE evidenced multiple exudative points in the posterior pole which caused serous neurosensory detachments involving the fovea. Fluorescein angiography (FAG) of said eye exhibited early hyperfluorescence at the level of the exudative points which increased in intensity and size in the angiogram’s late stages. In successive checkups we observed large accumulation of subretinal liquid at the macular level with worsening of the LE’s VA. We chose to treat with PDT with verteporfin the active points identified in the FAG. In the first session we treated the point which was responsible for the foveal involvement (fig. 1) and in the second one the peripheral lesions (fig. 2). The TAP (Treatment of Age-related macular degeneration with Photodynamic therapy) parameters were utilized (light dosage: 50 J/cm²; intensity: 600 mW/cm²; duration: 83 seconds, non-thermal laser light with 689 nm wavelength), excepting the spot size which was adjusted to the size of the lesion.

After one month of the first PDT session, a complete clinical and angiographic resolution of the exudative lesions was observed (fig. 3). The LE VA improved to 0,6 four months after receiving the treatment and after an 11-month follow-up no relapse has been detected while the VA increased to 1.

The second case report pertains to a 42-year old man referred to our center with a recurring DPRE diagnostic for assessment. The patient had exhibited multiple flares in BE, treated with Argon laser
photocoagulation. In spite of the treatment, the RE exhibited a posterior pole exudative retinal detachment with chronic active points and RPE alterations at the foveal level (fig. 4) with a finger-counting VA.

In the LE, cVA was of 0.7. The anterior pole did not exhibit pathological findings. The eye fundus of the LE revealed exudative multifocal lesions in the posterior pole and the Equator. The macula was not involved but exhibited slight alterations in the RPE. The inferior section of the retina exhibited characteristic atrophic tracts of the RPE. The FAG revealed hyperfluorescence since the initial development in relation to the active points, which increased in size and intensity in late stages (fig. 5).

Due to the multiple relapses and the negative evolution of the opposite eye, PDT with verteporfin was performed in the LE, treating in a single session all the points shown by the FAG. We utilized the same parameters as in the previous case.

Eleven months after the treatment, VA remains stable and the points inactive (fig. 6).

Fig. 3: Case 1: LE Fluorescein Angiography one month after the PDT session.

Fig. 4: Case 2: RE retinography.

Fig. 5: Case 2: LE Retinography and fluorescein angiography prior the PDT treatment.

Fig. 6: Case 2: LE Fluorescein angiography after treatment with PDT.
DISCUSSION

Argon laser photocoagulation has proved its efficiency in the anatomical resolution of DPRE lesions. However, it has a number of drawbacks: it is contraindicated in sub-foveal points, it can cause scotoma, it does not prevent recurrences and, most importantly, it is not conclusive that it can improve VA in the long term with statistical significance (2,5).

The advantages of PDT are that it can be utilized in sub-foveal points because it produces less retinal damage and therefore the risk of causing scotoma is lower, and it can be considered as a physiopathological treatment. In addition, the choroidal hypoperfusion induced by PDT would counteract the hyperpermeability of the choroids which, as commented above, would constitute the main disorder of this disease.

Considering the characteristics of this study, we cannot state that PDT improves final VA or prevents long-term recurrences.

Although there are several published cases of CSC treated with PDT, to date we have only found one case published in DPRE literature treated with PDT (4) with good anatomical and functional results. We define DPRE as a non-typical variant of CSC, characterized by multifocal exudative lesions in the posterior pole, atrophy tracts of the retinal pigment epithelium and peripheral non-regmatogenous retina detachments in more severe cases. The results obtained with PDT in our two patients are satisfactory. We consider this as an efficient and safe therapeutic option, although randomized long-term studies are necessary.

REFERENCES