Intermediate uveitis complicated by choroidal granuloma following subretinal neovascular membrane: case reports

Granuloma de coróide secundário a membrana neovascular sub-retiniana em uveíte intermediária: relato de casos

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ABSTRACT

Choroidal neovascularization is a very rare complication in intermediate uveitis. A 27-year-old female patient diagnosed with intermediate uveitis two years ago. She presented with 20/200 visual acuity, snowballs, snowbanks, and macular cystoid edema in the right eye observed by fluorescein and optical coherence tomography (OCT). Photocoagulation was performed in the inferior peripheral retina in both eyes. The patient refused to undergo the prescribed clinical treatment. She returned twelve months later presenting with count fingers visual acuity, dry retina and subretinal macular pigmented granuloma observed on OCT. A 15-year-old female patient with decreased visual acuity of 20/400 in the right eye for eight days. She presented with bilateral vasculitis and papilitis, in the right eye, hemorrhage and extramacular subretinal neovascular membrane were observed on fluorescein and OCT. She was treated with 40 mg prednisone and intravitreous injection of 1.25 mg bevacizumab. Five months later she presented with 20/50 visual acuity, and extramacular granuloma observed on OCT. The formation of subretinal granuloma in intermediate uveitis is a possibility when complicated by subretinal neovascular membrane.

Keywords: Choroidal neovascularization/drug therapy; Intermediate uveitis, complications; Visual acuity; Angiogenesis inhibitors/therapeutic use; Granuloma/etiology; Case reports [Publication type]

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INTRODUCTION

Intermediate uveitis is an intraocular inflammation involving the anterior vitreous, peripheral retina and pars plana. It usually affects patients from 5 to 30 years old, without gender or racial preferences. The etiology is unknown but there are several associated diseases. Symptoms are blurry vision, floaters and distortion of central vision. The syndrome is bilateral in 80% of the patients and chronic with periods of exacerbation and remission. Clinical presentation includes: mild to moderate anterior chamber inflammation, thin keratic precipitates in the lower portion of the cornea, autoimmune endotheliopathy, vitreitis, vasculitis in the peripheral retina, intravitreal "snowballs," retinal "snowbanking," optic neuritis and cystoid macular edema. The edema may become chronic and cause retinal cystoid degeneration and macular hole[1]. It might also form epiretinal membrane and subretinal choroidal neovascularization[1-2].

Treatment of intermediate uveitis is based on periocular and oral corticosteroids. Cryotherapy or laser photocoagulation of the peripheral retina

are options in patients with snowbanking when there is an insufficient response to periocular or systemic corticosteroids[3].

This study describes two cases of patients with intermediate uveitis that formed subretinal neovascular membrane and posterior macular granuloma.

CASE REPORTS

Case 1

A 27-year-old female presented with 20/30 in the right eye (RE) and 20/25 in the left eye (LE), endothelial corneal deposit, vitreous cells, snowballs, snowbanks in both eyes and macular cystoid edema in the right eye observed by fluorescein and optical coherence tomography (OCT) (Figure 1-A) two years ago. Results of systemic exploration as well as the usual tests were normal for infections and sarcoidosis.

She was followed for one year and using anti-inflammatory non-hormonal irregular (AINE) drops until a worsening in visual acuity and cystoid macular edema occurred, with VA 20/60 (RE) and 20/30 (LE). She used prednisone for sixty days and photocoagulation in the extreme inferior retinal periphery was performed in both eyes. Visual acuity improved to 20/20 in both eyes two months later.

The patient refused to continue the prescribed clinical treatment. She returned twelve months later presenting with count fingers visual acuity, dry retina and subretinal macular pigmented granuloma observed at OCT and fluorescein angiogram (Figures 1-B,1-C,1-D) in the RE and 20/20 in LE.

Case 2

A 15-year-old female patient with decreased visual acuity of 20/400 in the RE for eight days. She presented with bilateral vasculitis, vitreitis, snowballs, and papilitis. In the right eye, hemorrhage, extramacular subretinal neovascular membrane and serous subretinal detachment were observed on fluorescein and OCT (Figures 2-A, 2-B, 2-E). She was treated orally with 40 mg prednisone and one intravitreous injection of 1.25 mg bevacizumab. Seven months later she presented with 20/50 visual acuity, without signs of vasculitis and subretinal extramacular granuloma was observed at retinography, fluorescein and OCT (Figures 2-C, 2-D, 2-F).

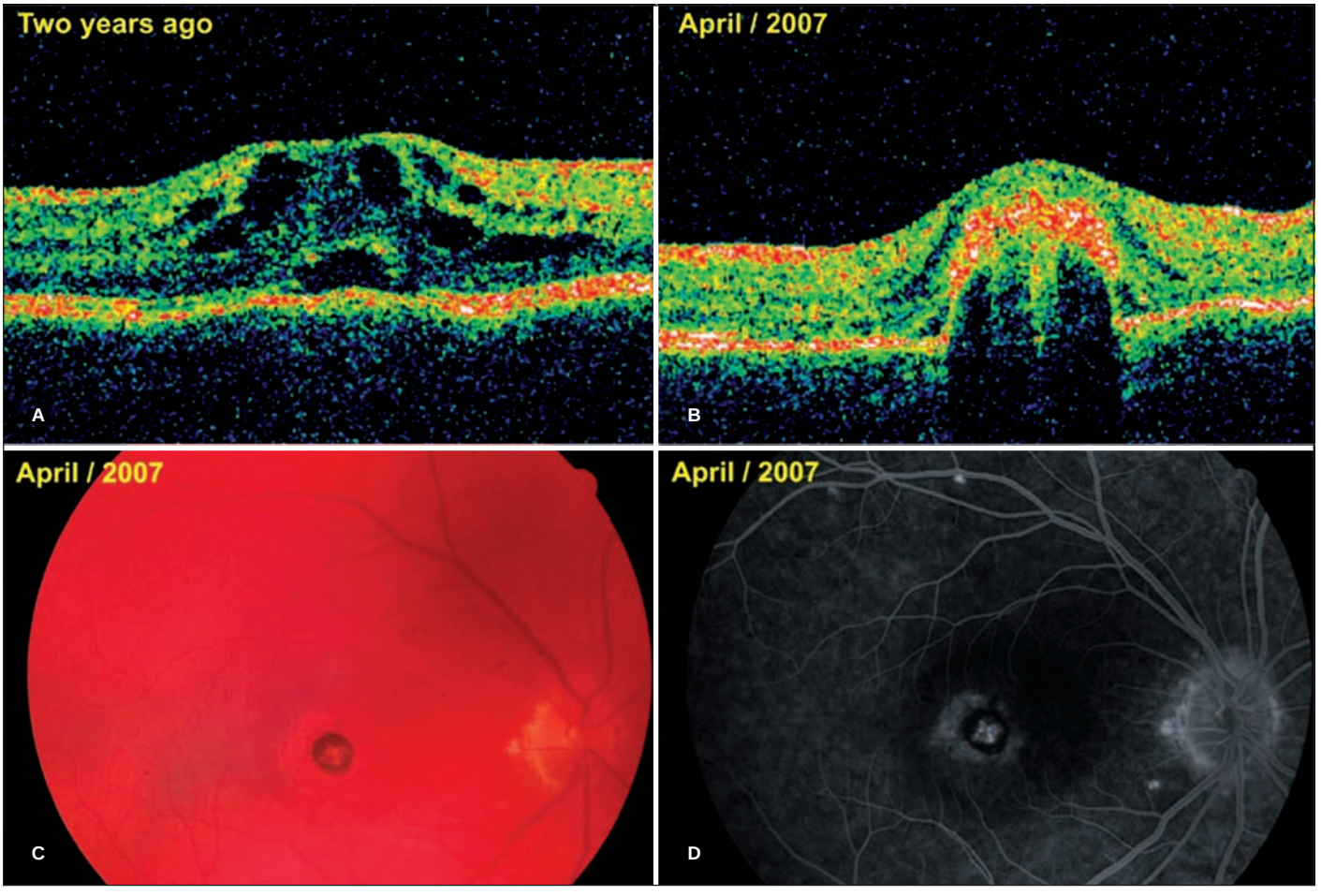

Figure 1 - Case 1 - Right eye: A) Presented macular cystoid edema; B) Macular pigmented granuloma on OCT; C) Retinography; D) Macular granuloma with fluorescein

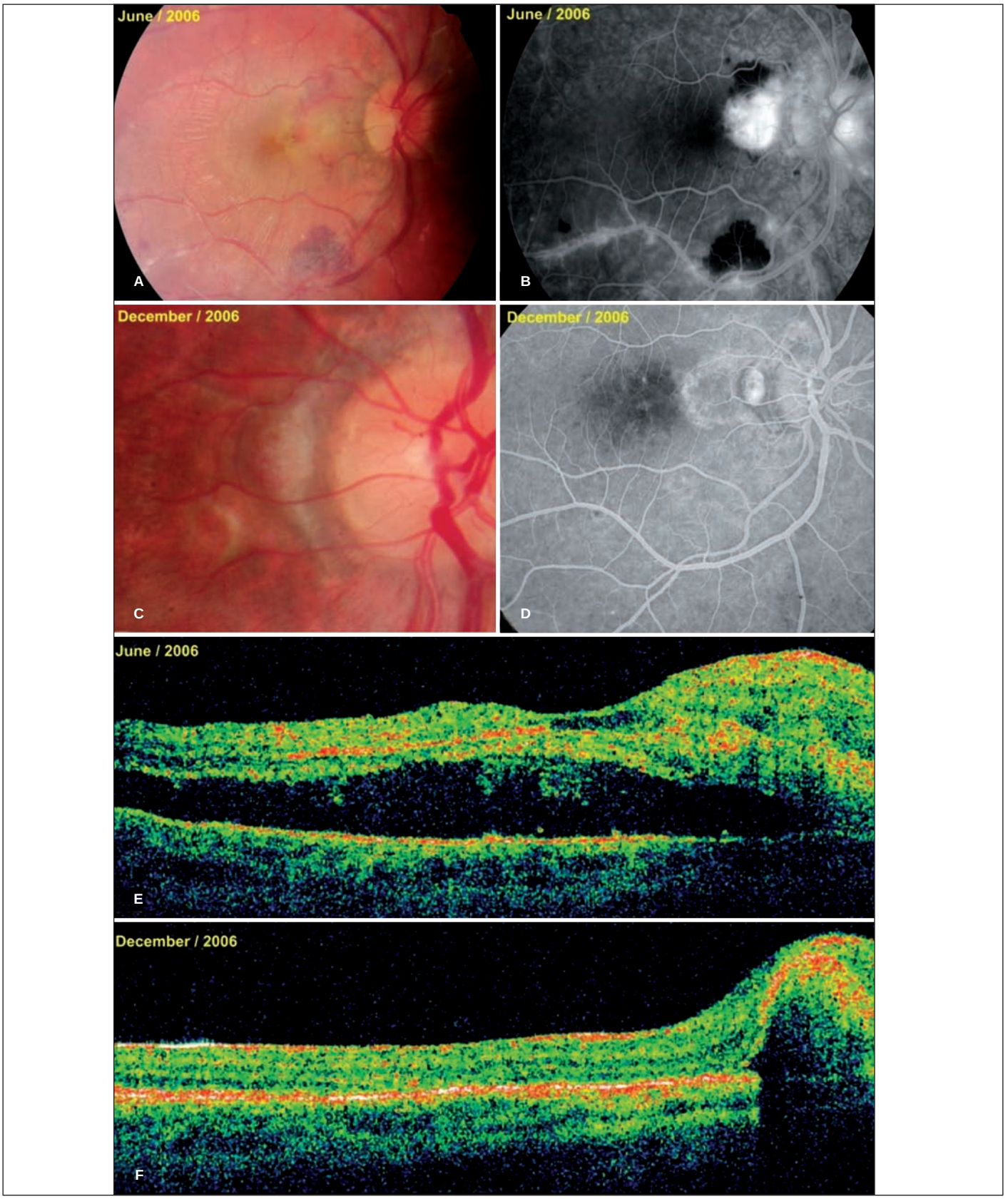

Figure 2 - Case 2 - Right eye: A) Retinography; B) Fluorescein with presence of hemorrhage and subretinal neovascular membrane; C-D) Subretinal extramacular granuloma observed at retinography (C) and fluorescein (D); E) Serous detachment of the neurosensory retina on OCT; F) subretinal extramacular granuloma observed on OCT

We describe two cases of healthy, young female patients with intermediate uveitis and cystoid macular edema that developed subretinal neovascular membrane and posterior subretinal granuloma.

Oréfice published two cases of patients with intermediate uveitis that formed subretinal neovascular membrane (SRNM)[1].

The chronic inflammatory process and persistent cystoid macular edema could be responsible for the retinal degeneration and consequent damage to the retinal pigmentary epithelium and choriocapilar complex and posterior SRNM[1]. Other authors have shown the role of RPE in SRNM maturation that would be enveloped, followed by resolution of subretinal leakage and consequent change in granuloma[4].

In the second case systemic corticosteroid treatment and anti-VEGF intravitreous injection could be related to accelerated SRNM maturation process and less retinal damage with better visual outcome.

In experimental models, the results suggest that involution of the neovascular membrane with maturation, as demonstrated by the cessation of visible fluorescein leakage, is the result of RPE proliferation that tightly envelopes the newly formed vessels and probably reabsorbs the previously accumulated subretinal fluid, preventing its further accumulation in the subretinal space[4-5]. Histopathologic findings in postmortem eyes after photodynamic therapy for choroidal neovascularization in age-related macular degeneration showed SRNM enveloped with RPE in both eyes[6].

Two new cases of patients with intermediate uveitis with subretinal neovascular membrane have been described.

RESUMO

Neovascularização de coróide é uma complicação muito rara na uveíte intermediária[1]. Paciente feminino, 27 anos, com diagnóstico de uveíte intermediária dois anos atrás. Apresentava acuidade visual de 20/200, “snowballs”, “snowbanks” e edema macular cistóide no olho direito observado na angiofluoresceinografia (AGF) e tomografia de coerência óptica (OCT). Fotocoagulação foi realizada na retina periférica inferior em ambos os olhos. A paciente recusou a submeter-se ao tratamento clínico prescrito. Ela retornou doze meses mais tarde apresentando acuidade visual de conta dedos, retina sem edema e granuloma sub-retiniano macular observado no OCT[2]. Paciente feminino, 15 anos, com diminuição da acuidade visual no olho direito (20/400) há oito dias. Apresentava vasculite e papilite em ambos os olhos, no olho direito, hemorragia e membrana neovascular sub-retiniana observada na AGF e OCT. Foi tratada com 40 mg de prednisona e injeção intravítreo de bevacizumab (1,25 mg). Cinco meses depois, apresentou acuidade visual de 20/50 e granuloma extramacular observada no OCT. A formação de granuloma sub-retiniano na uveíte intermediária é uma possibilidade quando complicada por membrana neovascular sub-retiniana.

Descritores: Neovascularização coroidal/quimioterapia; Uveíte intermediária/complicações; Acuidade visual; Inibidores de angiogênese/uso terapêutico; Granuloma/etiologia; Relatos de casos [Tipo de publicação]

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