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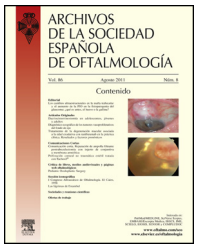

Short communication

Systematic study of retinal vein occlusion in young patients. Case report and review of the literature☆

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ABSTRACT

Purpose: To report the case of a young woman with retinal vein occlusion and prothrombin heterozygous mutation, and to review the current evidence on the systematic study in cases of retinal vein occlusion (RVO) in young patients.
Methods: Eligible articles were identified using a comprehensive literature search of PubMed.
Conclusion: RVO risk factors may have different relevance depending on each age group. In the systematic study of cases in young patients, it is recommended to look for "emerging" risk factors, bilateral involvement, or absence of "classic" risk factors.

Oclusión venosa retiniana en pacientes jóvenes y estudio sistémico. Caso clínico y revisión de la literatura

Palabras clave:
Oclusión venosa retiniana
Joven
Trombofilia
Factores de riesgo
Estudio sistémico

RESUMEN

Objetivo: Presentar el caso de una mujer joven con oclusión venosa retiniana (OVR) y mutación heterocigota de la protrombina, y revisar la evidencia científica actual acerca del estudio diagnóstico sistémico en casos de OVR en pacientes jóvenes.
Métodos: Se realizó una búsqueda exhaustiva de la literatura en PubMed.
Conclusión: Los factores de riesgo de la OVR pueden tener diferente importancia dependiendo de cada grupo de edad. En el estudio diagnóstico sistémico se recomienda buscar factores de riesgo "emergentes" en los casos de pacientes jóvenes, afectación bilateral o ausencia de factores de riesgo "clásicos".

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Introduction

After diabetic retinopathy, retinal vein occlusion (RVO) is the most common retinal vascular disease and an important cause of visual acuity (VA) loss. RVO generally expresses in the elderly population and is associated with cardiovascular risk factors. Occasionally, young patients also exhibit RVO, in which case an extended systemic study could be necessary.

Clinic case report

Female, 39, who visited the Emergency Dept. due to myodesopsia in the left eye during 7 days. No relevant personal history was found. A complete ophthalmological examination produced a best corrected visual acuity of 20/20 in both eyes and intraocular pressure of 16 mmHg in both eyes. Slitlamp examination of the anterior segment did not reveal pathological findings. Left eye ocular fundus examination showed the presence of hemorrhages with cotton-like exudates along the superior temporal arch with slight edema of the papilla upper edge (Fig. 1). Macular optic coherence tomography (OCT) discarded the presence of retinal thickening, evidencing however some hyper-reflective dots in the superior and nasal macular area (Fig. 2). The diagnostic was superior temporal branch venous occlusion.

A complete study was carried out, including blood pressure, Holter-ECG, Doppler echography of the supra-aortic trunks, nuclear magnetic resonance of the brain, abdominal echography, chest X-ray and bilateral mammography without significant findings. In addition, complete hemogram, lipidic profiles, glycemia, hepatic and renal biochemistry, total protein and proteingram, C-reactive protein, iron metabolism, electrolytes, thyroid profile, immunoglobulin and homocysteine count, self-immunity profile (including the antiphospholipid profile: lupic anticoagulant, anti-cardiolipin and anti-β2-glycoprotein), coagulation profile, globular sedimentation rate and biochemistry and urinary sediment produced normal results. In addition, hereditary thrombophilic factors were analyzed (Leiden factor V, prothrombin 20210A mutation,

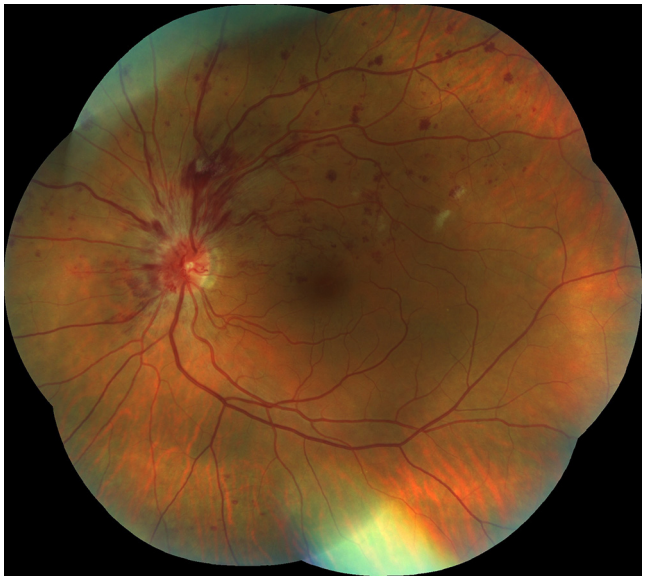

Fig. 1 – Left eye ocular fundus image, showing hemorrhages and exudates along the superior arches, with optic disc superior nasal edema.

antithrombin III, and C and S proteins), obtaining a positive result for the prothrombin mutation heterozygote state.

It was decided to follow-up the patient during 30 weeks, during which she did not require treatment, with VA remaining at 20/20. The hemorrhagic component returned, establishing epi-papillary shunts (Fig. 3). No macular thickening was observed in OCT images. Fluorescein angiography was carried out, without evidencing ischemia (Fig. 4).

Discussion

The Virchow triad (blood flow stasis, vascular wall changes and blood alterations such as hyperviscosity and hypercoagulability) is commonly applied to explain possible causes of RVO. The first 2 factors have been broadly studied and their causes have been recognized as "classic" risk factors, whereas

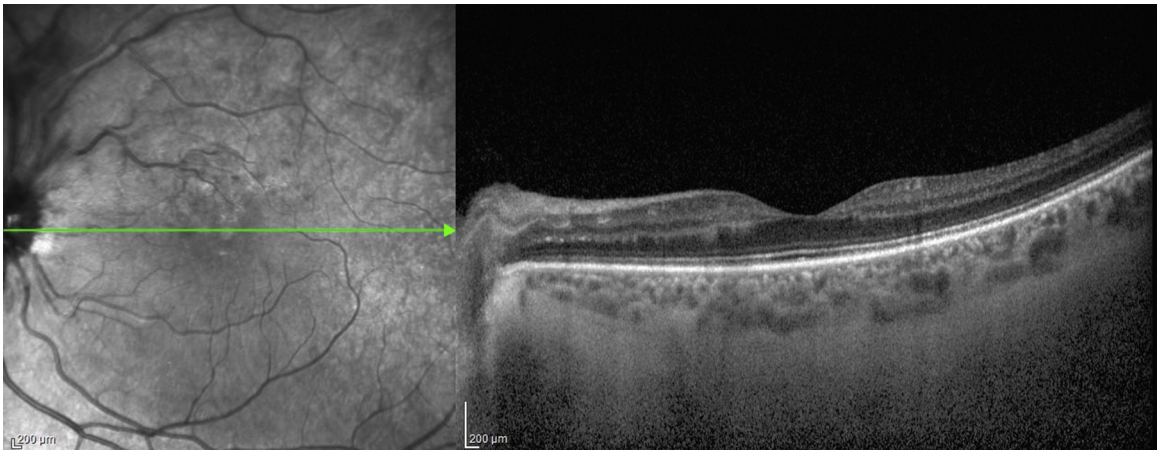

Fig. 2 – Optic coherence tomography section focused on the fovea, showing the absence of intra- or sub-retinal fluid, showing hyper-reflective dots in the perifoveal area.