Arquivos Brasileiros de
Oftalmologia

EYE IMAGES

Multimodal evaluation of the pitchfork sign in a patient with type 2 macular neovascularization that was treated with aflibercept

Isabela Spinelli Mota[1], Juliana Souza Gomes[1], Fernanda Cunha[1], Michelle Gantois[1,2]

1. Fundação Altino Ventura, Recife, PE, Brazil.
2. Hospital de Olhos de Pernambuco, Recife, PE, Brasil.

The pitchfork sign (PS) is a distinctive finding on optical coherence tomography (OCT) that is characteristic of type 2 macular neovascularization (MNV) secondary to punctate inner choroidopathy (PIC)[1-3]. A 57-year-old male presented to us with complaints of blurring of vision in the right eye (OD) for one month. At the time of admission, the best-corrected visual acuity was 20/150. OCT and OCT angiography revealed a PS (Figure 1). Thus, the patient was diagnosed with type 2 MNV secondary to PIC. A loading dose of three aflibercept

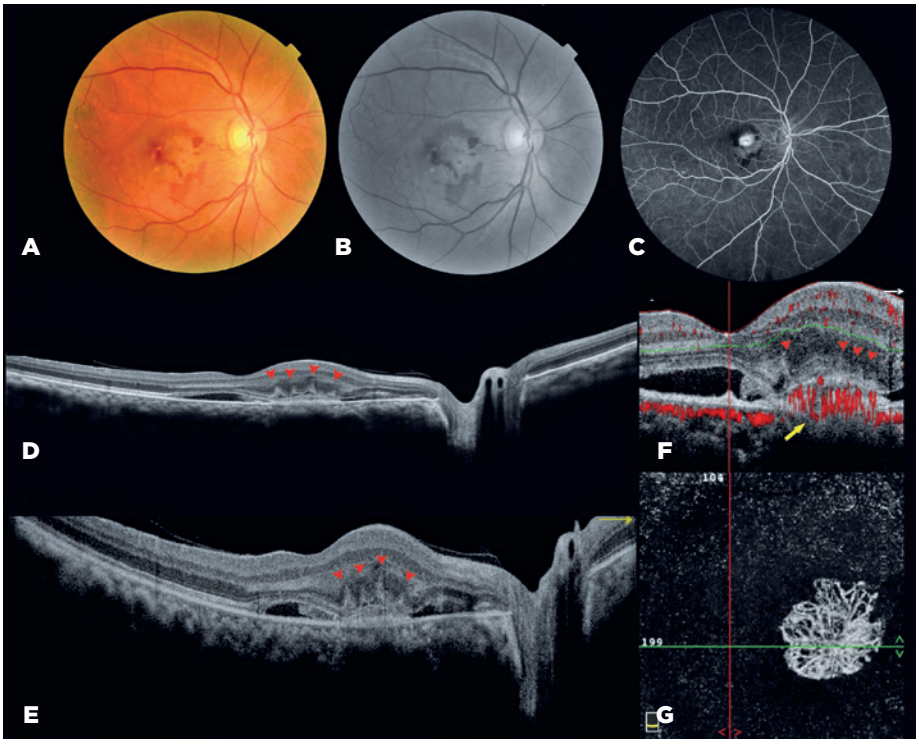

Figure 1. Multimodal images of the right eye obtained at the first visit. A) Retinography and B) redfree retinography showing subretinal hemorrhage in the macular region. C) Fluorescein angiogram showing leakage (hyperfluorescence). D) Optical Coherence Tomography B-scan (OCT-B) showing a pitchfork sign, choroidal thickening, and increased caliber of the Haller's layer vessels. E) Finger-like vertical projections can be seen (red arrow head). F) OCTB showing pitchfork sign (red arrow head) and decorrelation signal (yellow arrow). G) . En-face OCTA showing a neovascular membrane in the outer retinal slab.

Submitted for publication: May 24, 2024
Accepted for publication: July 26, 2024

Funding: This study received no specific financial support.

Disclosure of potential conflicts of interest: The authors declare no potential conflicts of interest.

Corresponding author: Michelle Gantois.
E-mail: michellegantois0109@gmail.com

intravitreal injections (IVI) was administered. No other drugs were prescribed. A good response was observed in the treated eye. At the 1-year follow-up, no neovascularization reactivity was observed, and the visual acuity had improved to 20/20 (Figure 2). The first-choice treatment for MNV is anti-VEGF IVIs. Other reports have described good morphofunctional results in patients treated with bevacizumab or ranibizumab. However, they reported the reappearance of new lesions[2,4]. In our patient, the visual acuity significantly improved and the retinal lesions regressed after the administration aflibercept IVIs, without the use of corticosteroids or immunosuppressants.

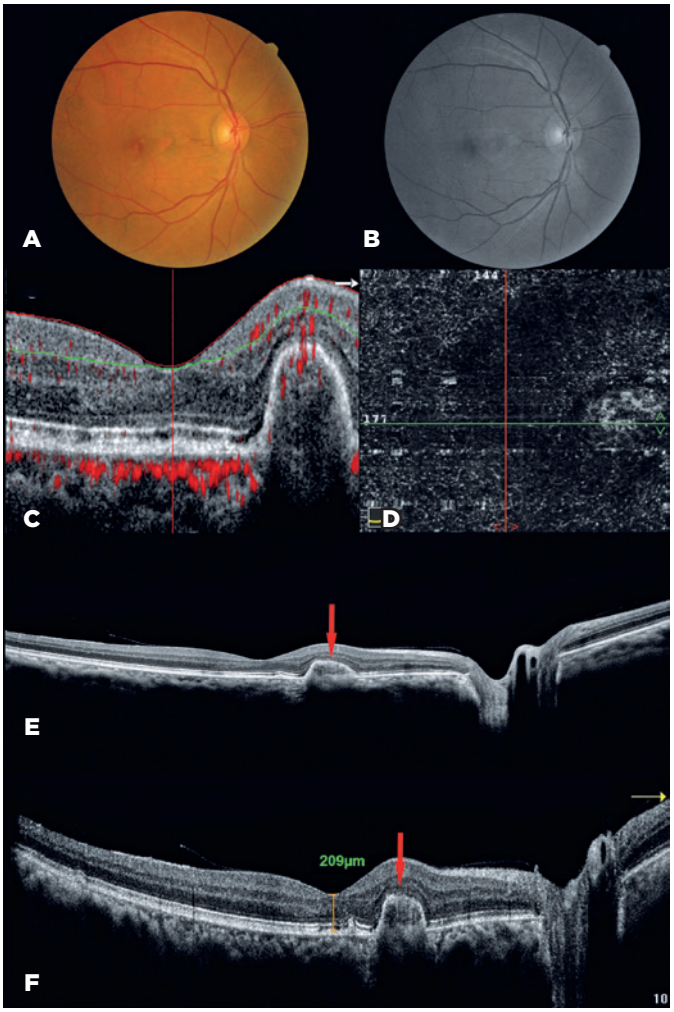

Figure 2. A) Retinography and B) redfree retinography showing remission of the retinal hemorrhage. C) Optical coherence tomography (OCT) angiography showing pigment epithelial detachment (PED) with a significantly reduced decorrelation signal. D) Involution of the neovascular formation can be seen in the external retinal slab. E and F) OCT B-scan showing the presence of PED and involution of the subretinal hyperreflective material and subretinal fluid.

AUTHORS' CONTRIBUTIONS:

Significant contribution to conception and design - Isabela Spinelli Mota, Juliana Souza Gomes, Maria Fernanda Cunha, Michelle Gantois. **Data acquisition:** Isabela Spinelli Mota, Juliana Souza Gomes, Maria Fernanda Cunha, Michelle Gantois. **Data analysis on interpretation:** Isabela Spinelli Mota, Juliana Souza Gomes, Maria Fernanda Cunha, Michelle Gantois. **Manuscript drafting:** Isabela Spinelli Mota, Juliana Souza Gomes, Michelle Gantois. **Significant intellectual content revision of the manuscript:** Isabela Spinelli Mota, Juliana Souza Gomes, Maria Fernanda Cunha, Michelle Gantois. **Final approve of the manuscript:** Isabela Spinelli Mota, Juliana Souza Gomes, Maria Fernanda Cunha, Michelle Gantois. **Statistical analysis:** Not applicable. **Obtaining funding:** Not applicable. **Supervision of administrative, technical, or material support:** Michelle Gantois. **Research group leader:** Michelle Gantois.

REFERENCES

1. Watzke RC, Packer AJ, Folk JC, Benson WE, Burgess D, Ober RR. Punctate inner choroidopathy. Am J Ophthalmol.1984;98(5):572-84.
2. Ahnood D, Madhusudhan S, Tsaloumas MD, Waheed NK, Keane PA, Denniston AK. Punctate inner choroidopathy: A review. Surv Ophthalmol. 2017;62(2):113-26.
3. Hoang QV, Cunningham ET Jr, Sorenson JA, Freund KB. The "pitchfork sign" a distinctive optical coherence tomography finding in inflammatory choroidal neovascularization. Retina. 2013;33(5):1049-55.
4. Lupidi M, Muzi A, Castellucci G, Kalra G, Piccolino FC, Chhablani J, et al. The choroidal rupture: Current concepts and insights. Surv Ophthalmol. 2021;66(5):761-70.