Importance of the Optomap ultra-wide angle autofluorescence and Solix-OCT Angio tomography in the diagnosis and follow-up of a sub-foveal neovascular membrane in a Young myopic woman

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ABSTRACT:
PURPOSE: demonstrate de importance of OCT Angio tomography in the diagnosis and follow up of Subretinal neovascularization in a myopic patient and the diagnosis of PIC with auto fluorescent lesions in contra-lateral eye. **METHODS:** we presented a case of a myopic, 38 years old woman who had a diagnosis of CSC (central serous chorioretinopathy) in another ophthalmic service, who had Subretinal neovascularization over the fovea. The autofluorescence showed Hiper-autofluorescent punctate lesions on the contra-lateral eye. The neovascular membrane had on 3D a unfaced image, the sign of tide regression that shows landmarks of regression of the subretinal fluids like the landmarks left on the sand by the regression of the sea tide. After the diagnosis, we injected Intra-Vitreous aflibercept three times in the following 6 months, following the improvement of the neovascular subretinal membrane. **RESULTS:** the membrane was followed by Optomap ultra-wide field color and auto fluorescence as well by the Solix OCT Angio tomography monthly, and showed regression of the neovascular membrane in the first day after injection. The fluid reappeared after two months, after the first injection, and three months after the second injection. **DISCUSSION:** This case was misdiagnosed at the first ophthalmic service, because they didn't see the medium periphery of the other eye with autofluorescence. The treatment would be done for the neovascular membrane with the same medication, but the different diagnosis. The Solix OCT Angio Tomography showed the neovascular membrane and the landmarks of the regression of the fluid, and the Optomap ultrawide Angle autofluorescence showed the lesions in the contra-lateral eye permitting the PIC diagnosis. She would be told to do not use corticosteroid, and in some cases, this is the suggested treatment for PIC.

INTRODUCTION:

Punctate inner choroidopathy (PIC) is a specific form of posterior uveitis, firstly described by Watzke and colleagues in 1984 [1]. The disease most commonly affects young, myopic women and is characterized by multifocal, well- circumscribed, yellow-white choroidal lesions at the posterior pole of the retina, without anterior or vitreous inflammation. Sub-foveal lesions can result in symptoms including blurred vision, scotoma, metamorphopsia, and photopsia [2, 3]. PIC usually does not cause severe loss of vision unless appear development of choroidal neovascularization (CNV), but CNV can develop in up to 70% of patients with PIC [2, 4]. We describe a case of CNV in a young patient who had a previous diagnosis of CSC (Central Serous Chorioretinopathy), with indication of anti-vegf treatment. The Optomap auto-fluorescence and Solix angio-OCT were fundamental in the diagnosis and the treatment.

METHODS: we presented a case of a myopic, 38 years old woman who had a diagnosis of CSC (central serous chorioretinopathy) in another ophthalmic service, who had Subretinal neovascularization over the fovea. The Optomap ultra-wide field autofluorescence showed Hyper-autofluorescent punctate lesions on the contra-lateral eye. An optical coherence

tomography (OCT) of the macula was done and a neovascular membrane was identified above the fovea, with a intact foveal umbus. She had a 3D En face OCT image, the sign of tide regression that shows landmarks of regression of the subretinal fluids like the landmarks left on the sand by the regression of the sea tide.

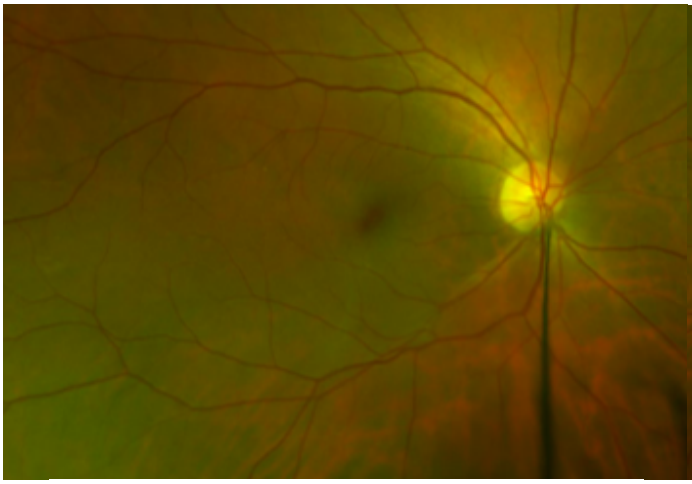

Fig 1 OD Color Optomap

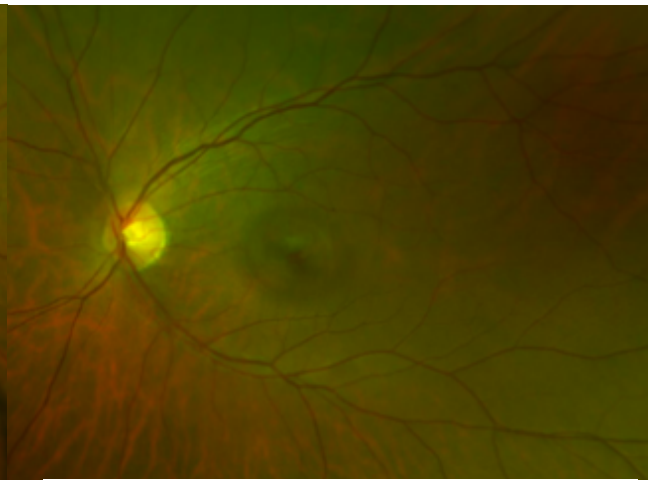

Fig 2 OS Color Optomap

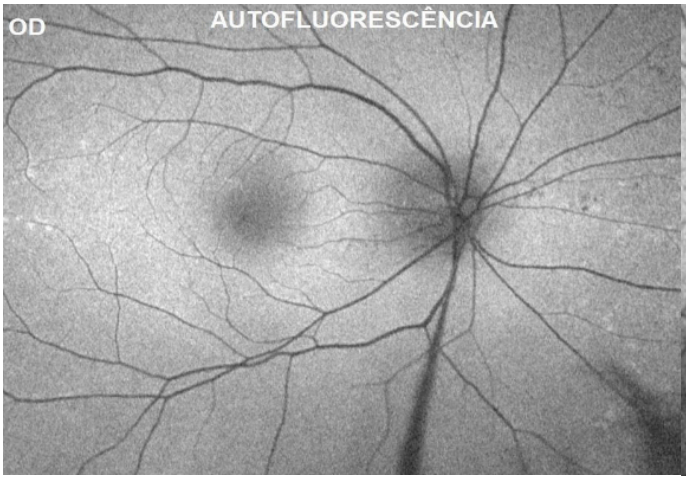

Fig 3 OD Hyper-autofluorescence dots at the posterior pole

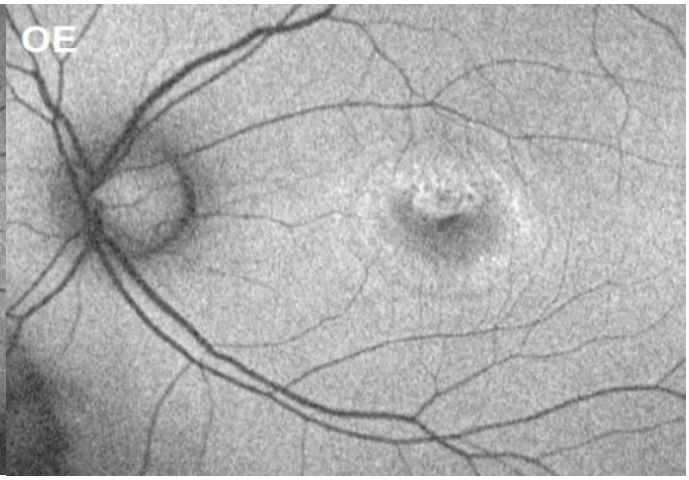

Fig 4 OS Hyper-autofluorescence margin over the fovea at the posterior pole

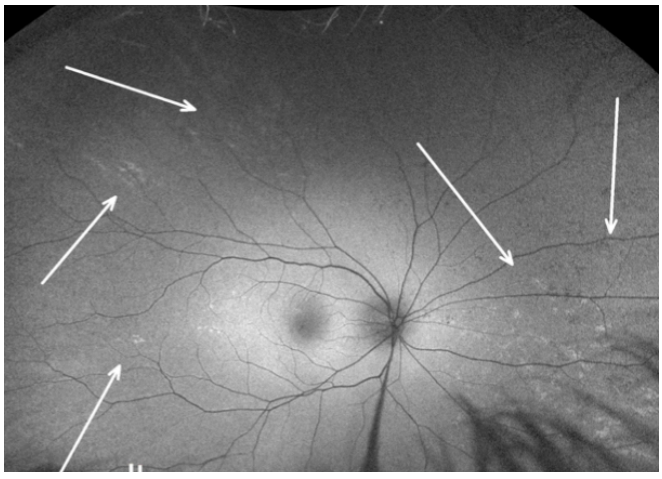

Fig 5 OD Hyper-autofluorescence Wide angle optomap

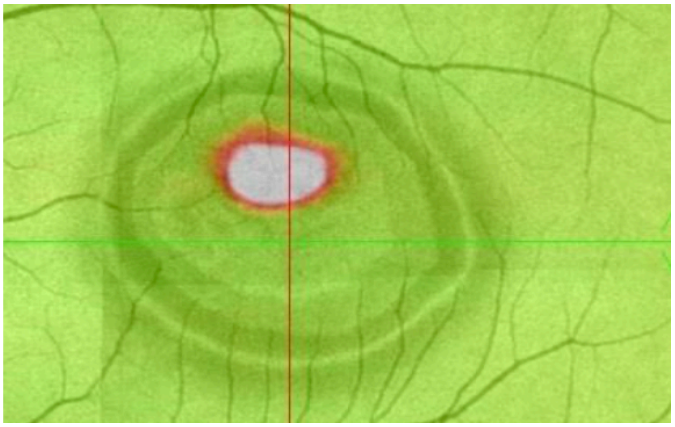

Fig 6 OS Enface SOLIX OCT. In white, the thickened retina above the fovea, and the “area of regression oft sea tide"

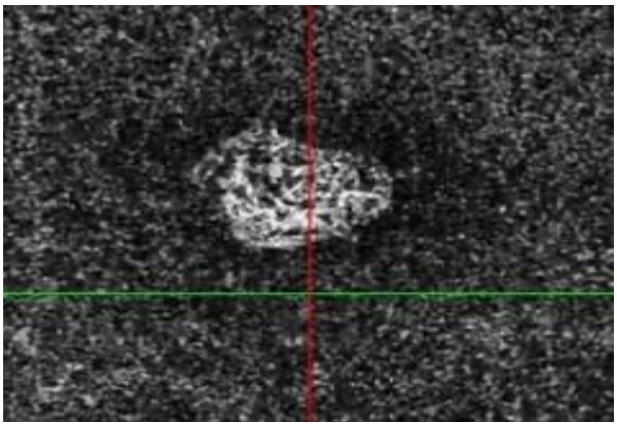

Fig 7 (OS) SOLIX Angio-OCT. New vessel before treatment

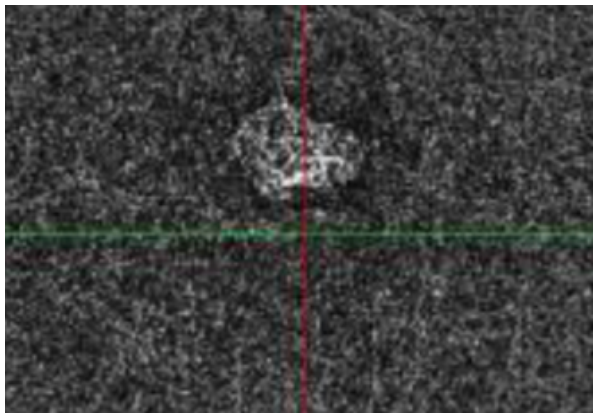

Fig 8 (OS) SOLIX Angio-OCT. New vessel parcial regression just 1 day after treatment

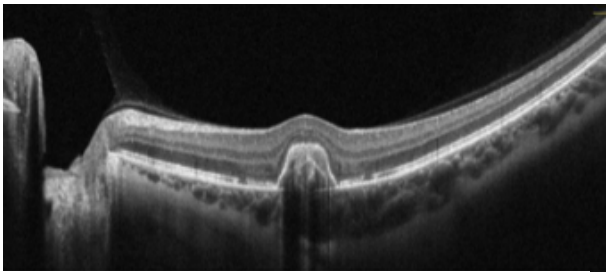

Fig 9 (OS) SOLIX OCT B SCAN. New vessel before treatment

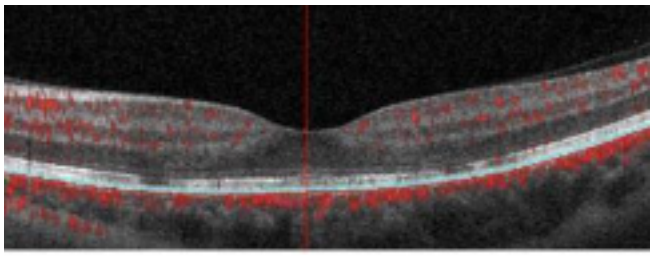

Fig 10 (OS) SOLIX OCT B SCAN. Intact Foveal Umbus. Before treatment

After the diagnosis, we injected Intra-Vitreous aflibercept three times in the following 6 months, following the improvement of the neovascular subretinal membrane.

RESULTS: the membrane was followed by Optomap ultra-wide field color and auto fluorescence as well by the Solix OCT Angio tomography monthly, and showed regression of the neovascular membrane in the first day after injection. The fluid reappeared after two months, after the first injection, and three months after the second injection Considering that PIC is a kind of ocular inflammatory disorder, corticosteroid is recommended to reduce inflammation. For PIC patients without CNV, oral corticosteroid may help to achieve more rapid visual improvement although spontaneous resolution of the lesions can occur in many cases without treatment [5]. However, there is no consensus on the optimal treatment for PIC with CNV. The vision were OD 20/30 (she has keratoconous) and OS 20/25.

DISCUSSION: This case was misdiagnosed at the first ophthalmic service, because they didn't see the medium periphery of the other eye with autofluorescence. The treatment would be done for the neovascular membrane with the same medication, but the different diagnosis. The Solix OCT Angio Tomography showed the neovascular membrane and the landmarks of the regression of the fluid, and the Optomap ultrawide Angle autofluorescence showed the lesions in the contra-lateral eye permitting the PIC diagnosis. She would be told to do not use corticosteroid, and in some cases, this is the suggested treatment for PIC. The correct diagnosis can change the outcome of the disease because of the correct treatment.

FINAL COMMENTS: The Optomap with autofluorescence and the Solix OCT and OCT-A were essential to the correct diagnosis, and for the follow up of the disease, given us the correct moment for the treatment

References

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