Detection of multiple choroidal neovascularization membranes (CNVs) related to chronic serous chorioretinpathy (CSCR)

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INTRODUCTION

Choroidal neovascularization (CNV) is a complication of chronic central serous chorioretinopathy (CSCR) leading to reduced visual acuity with prevalence ranging 2% - 15.6 %. Risk factors include previous sessions of laser photocoagulation, seniors with CSCR and diffuse retinal pigment epithelium (RPE) loss.

In this case report we present an interesting case of a 66-year-old-male, with no medical record, previously diagnosed with CSCR and treated with photodynamic treatment (PDT) 2 years ago, who was referred to our Medical Retina Department due to progressively decreased vision on the left eye (OS).

METHODS

After a thorough medical and ocular history report, a complete ocular examination was undertaken with visual acuity (VA), intraocular pressure (IOP) and anterior and posterior segment evaluation on slit lamp. Optical Coherence Tomography (OCT, HRA + OCT Spectralis, Heidelberg Engineering), Fundus Autofluorescence (FAF), Fluorescein Angiography (FA) and Optical Coherence Tomography Angiography (OCT-A, Optovue Inc) were also obtained and analyzed in order to conclude to the right diagnosis.

RESULTS

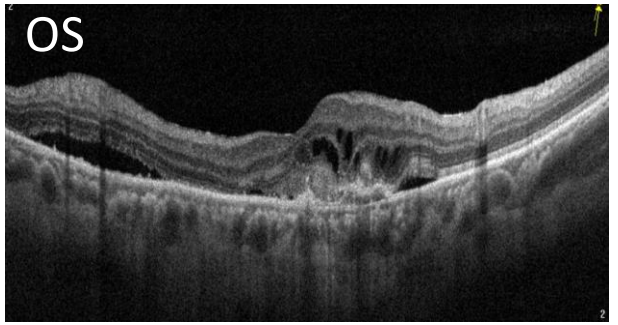
➢**Complete Ocular Examination :**

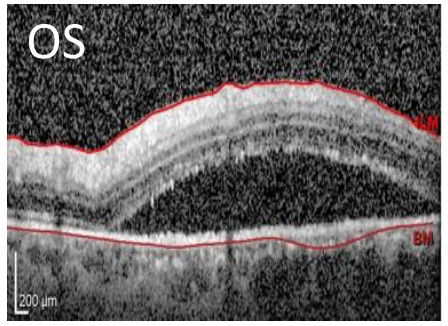
The examination of the right eye (OD) was unremarkable.
The examination of the left eye (OS) showed:

- BCVA : 5/10 , IOP : 13/12
- Anterior chamber (AC) : unremarkable
- Fundoscopy : RPE changes and retinal fluid

➢**Multimodal Imaging:**

OCT : multiple pigment epithelial detachments (PEDs), intraretinal fluid (IRF), subretinal fluid (SRF) progressing inferiorly and hyperreflective subretinal material

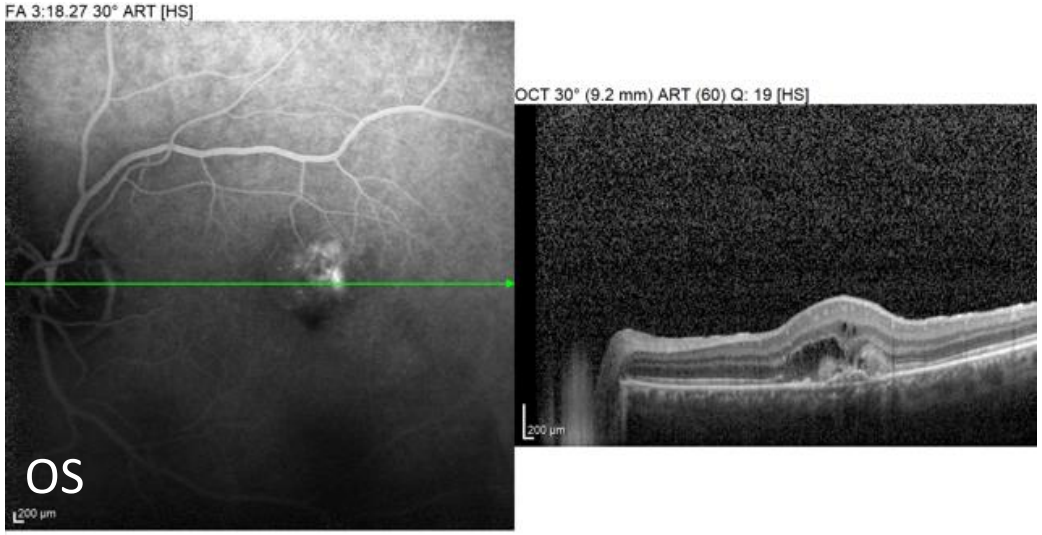




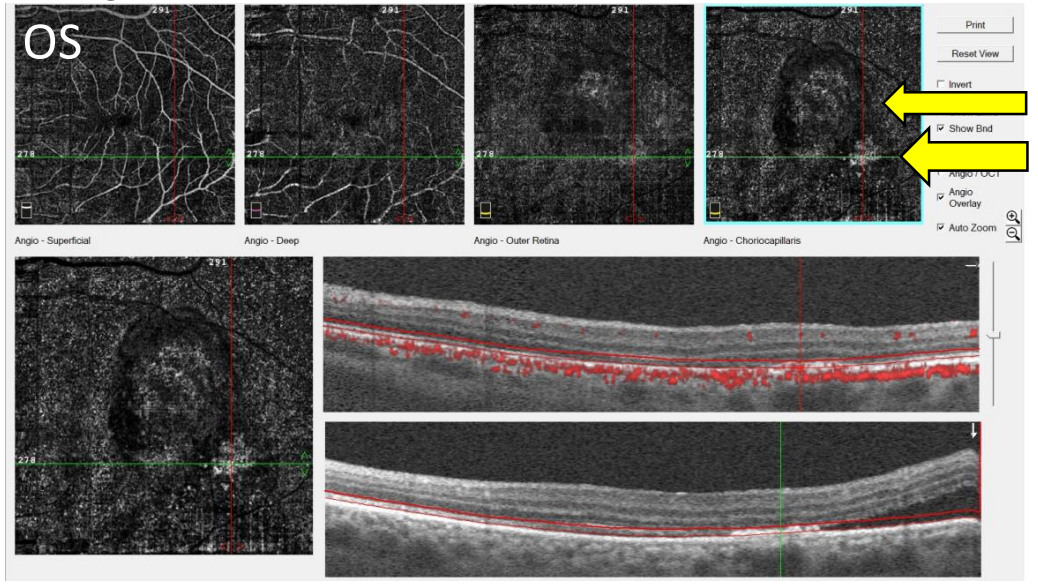
RESULTS

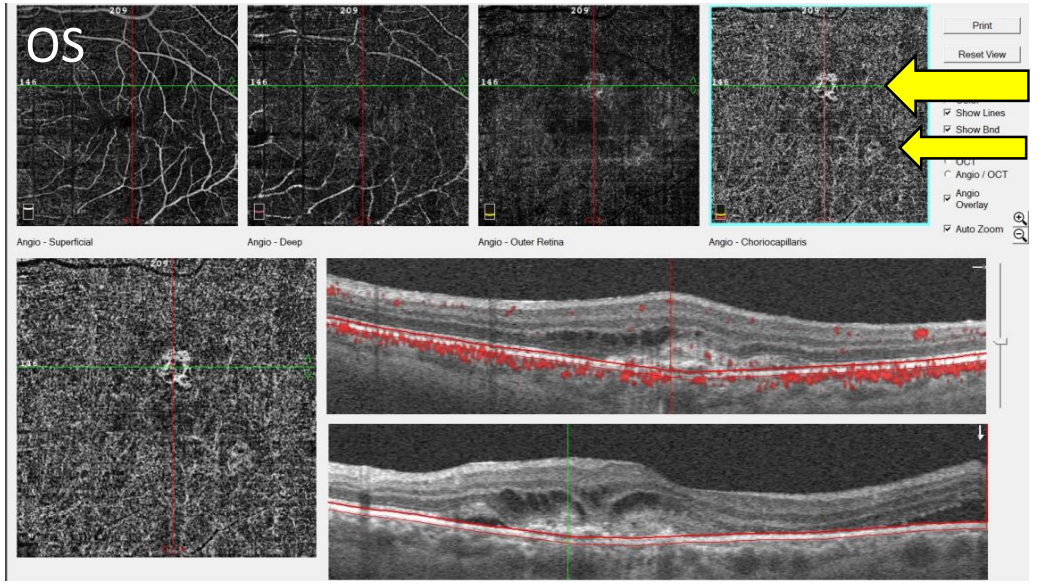
- **FAF** : hyperautofluorescence mainly inferiorly creating a tracking sign

- **FA** : leakage that correlates with the pigment epithelial changes - PED on OCT



- **OCT-A** : two distinct CNVs that correlated with diffuse leakage on FA





TREATMENT

- Treatment of CNV secondary to chronic CSCR : OS intravitreal injection with anti-vascular endothelial growth factor (VEGF).

DISCUSSION

- This otherwise healthy man presented with reduced visual acuity in OS due to chronic CSCR treated with PDT 2 years prior to his admittance.
- Complete ocular examination and multimodal imaging confirmed the diagnosis of complicated chronic CSCR. More specifically, OCT-A with careful segmentation on each existing PED revealed the presence of two distinct CNV membranes.
- This case report highlights the value of OCT-A as a modality in helping us better understand the pathology of CNV related to chronic CSCR as well as the possible occurrence of multiple CNVs on CSCR background. In general, multimodal imaging plays an important role not only in the diagnosis and treatment but also in the follow-up and the prognosis of the disease.

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