

MULTIMODAL EVALUATION OF THE RETINA IN TOXIC MACULOPATHY DUE TO ANTIMALARIAL DRUG



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PURPOSE

To report a case of toxic maculopathy and to describe the findings of the multimodal evaluation of the retina.

INTRODUCTION

The use of antimalarial drugs, such as hydroxychloroquine, for the treatment of autoimmune diseases is not uncommon among rheumatologists and dermatologists.

Despite the low risk, prolonged use of these medications can result in damage to the photoreceptors and pigmented retinal epithelium, an event known as toxic retinopathy. Advanced cases of this retinopathy can lead to irreversible loss of vision and, for this reason, periodic screening tests are mandatory for these patients.

Current guidelines for monitoring these patients include assessment of the retina through tests that assess anatomical structure and visual function.

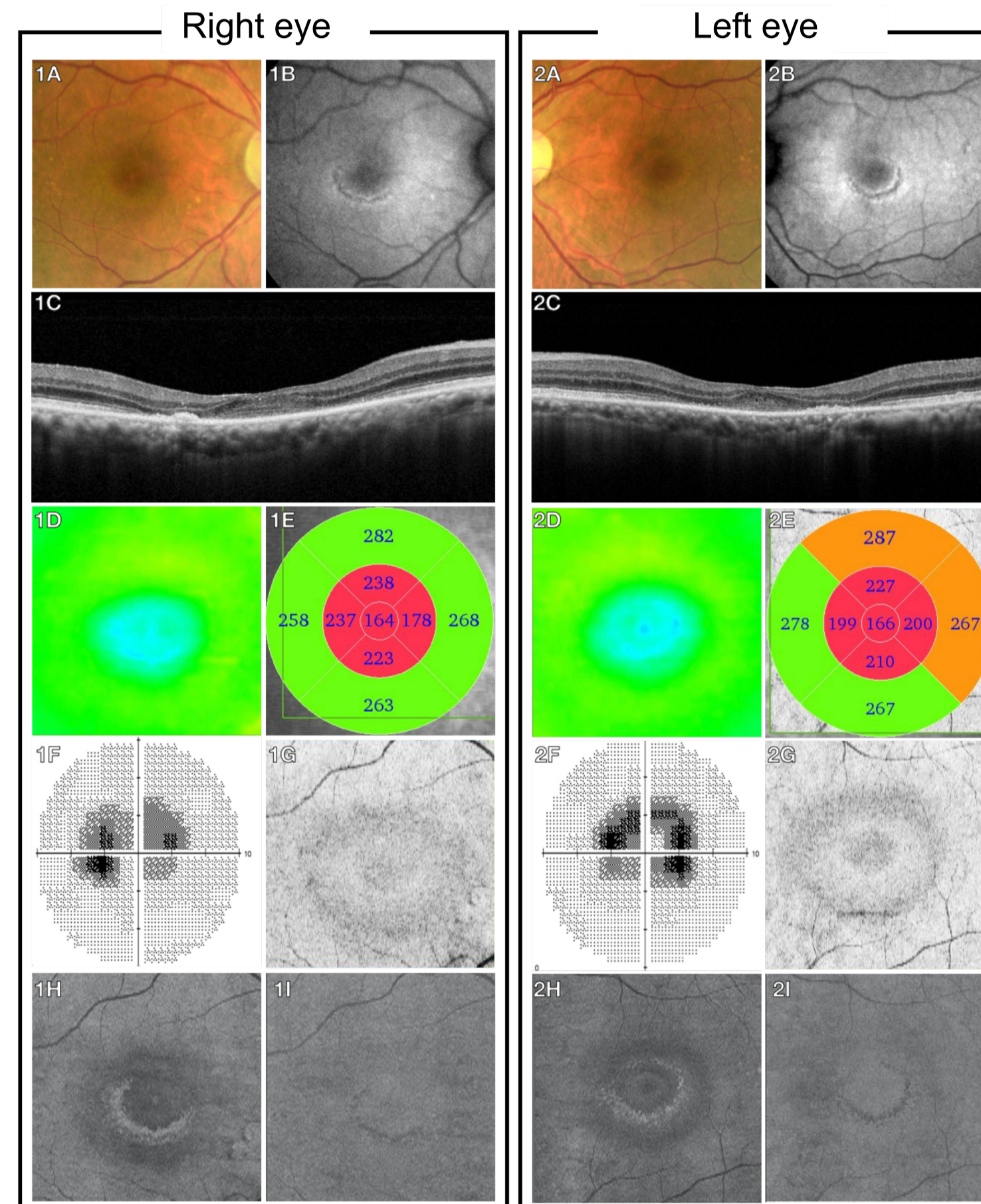
CASE REPORT

75 yo male, comes for ophthalmologic consultation without any complaints. He refers to the use of Hydroxychloroquine for the treatment of Lichen Planus for a long time.

The ophthalmological examination of both eyes (BE) showed the best corrected visual acuity of 20/40, biomicroscopy and tonometry were unremarkable in BE. Fundoscopy revealed mild macular hypochromic alteration, concentric to the fovea, in BE.

The multimodal evaluation of the retina performed highlighted the alteration previously seen in fundoscopy.

The patient was advised to make a new appointment with the Dermatologist and discontinue the use of the medication.



1A and 2A: Color retinography showing slight hypopigmented lesion concentric to the fovea. 1B e 2B) FAF showing a hypoautofluorescent area surrounded by a hyperautofluorescent area. 1C e 2C) SD-OCT B-scan revealing alteration of the external retina and foveal depression. 1D, 1E, 2D e 2E) Quantitative analysis of the macular thickness showing thinning. 1F e 2F) Central scotoma (Humphrey 10-2). 1G e 2G) En-face OCT (shadow map) showing alternating hyper and hyporeflective changes, in a bull's eye aspect. 1H e 2H) En-face at the level of the ellipsoid zone, presenting a hyperreflective lesion corresponding to the hypochromic area seen on retinography. 1I e 2I) En-face at the level of Bruch's membrane showing hyporeflective area corresponding to the hypoautofluorescent area seen in the autofluorescence exam.

DISCUSSION

Retinal toxicity due to antimalarials is a serious condition as it can cause irreversible visual loss when the diagnosis is postponed. Proper screening has the potential to prevent the occurrence of advanced forms of the disease. Sometimes clinical examination can't identify properly the maculopathy, and that's why the AAO suggests for this screening : Computerized visual field, SD-OCT, Multifocal ERG and Autofluorescence.

The different scans performed with the SD-OCT can be analyzed objectively and subjectively. The B-scan is the most widespread image and presents more information to the ophthalmologist. Mild changes in the outer layers of the retina are the initial changes in the disease. In the final stages there is atrophy of the entire external retina in the macular region.

In this case, in addition to the fundoscopic finding, autofluorescence, SD-OCT (B-scan and C-scans) and computerized campimetry showed changes compatible with toxic maculopathy (bull's eye).

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