Medical Retina

BULL´S EYE MACULOPATHY IN NEAR INFRA-RED REFLECTANCE AS AN EARLY SIGN OF HYDROXYCHLOROQUINE TOXICITY

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PURPOSE: Hydroxychloroquine (HCQ) ocular toxicity is rare but severe and progression can occur even after termination of therapy. Case reports have suggested that a bull's eye maculopathy detected by near-infrared reflectance (NIR) may indicate early HCQ toxicity. This study aimed to provide further evidence of the role of NIR images in detecting early HCQ retinopathy using a large case series from a tertiary center.

METHODS: This retrospective cross-sectional study evaluated patients treated with HCQ that underwent routine screening at Hospital Santa Maria, Lisbon, with optical coherence tomography (OCT), fundus autofluorescence (FAF) and 10-2 perimetry between July and December 2021. NIR images captured alongside OCT were subsequently graded independently by 2 masked graders for the presence of bull's eye maculopathy and the result was compared to the outcome of the screening.

RESULTS: A total of 246 eyes from 123 patients were included, one hundred eleven (90%) were female with a mean age of 55.2±13.8 years. Mean time of HCQ usage was 84.0±72.3 months and the mean weekly dose 2327±650 mg. Two eyes showed toxicity in all 3 routine screening exams, with one patient suspending HCQ. The prevalence of bull´s eye lesions in NIR was 13% (33 eyes) with substantial intergrader agreement, a 71.3% specificity and 88.0% negative predictive value for HCQ toxicity.

CONCLUSIONS: We suggest that NIR changes may be a sign of early HCQ toxicity. The detection of NIR bull´s eye lesions may warrant increased screening frequency.

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