**Summary of select, peer reviewed published research on retinal toxicity:**

Hydroxychloroquine(HCQ) and its predecessor, chloroquine(CQ) are antimalarial drugs with well-established benefits for treating rheumatoid arthritis, lupus and other connective tissue and skin disorders. Extensive research has shown long-term usage of either drug to be associated with retinal toxicity. Early detection of HCQ/CQ retinopathy is imperative to minimize the risk of any associated vision loss.

The American Academy of Ophthalmology (AAO) recommends the use of objective testing to screen for retinal toxicity. Multifocal electroretinography(mfERG) provides objective examination of retinal function in patients taking HCQ/CQ. A recent 2019 study suggests that although sdOCT can detect retinal toxicity, mfERG is more sensitive to retinal dysfunction that may occur before structural abnormalities appear. Also, mfERG can be useful in confirming the absence of retinal toxicity when perimetry or other tests detect abnormalities.

While most retinal toxicity research has focused on HCQ/CQ drugs, an increasing number of clinical cases suggest other medications such as HIV treatment Dideoxyinosine and cancer treatments such as Cisplatin may also contribute to retinal toxicity. More research is needed in this area.

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