

Retinal Manifestations in Systemic Lupus Erythematosus: Evaluating the Impact of Visual Impairment and Hydroxychloroquine Toxicity: A cross-sectional study in Saudi Arabia

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ABSTRACT

Systemic lupus erythematosus (SLE) is highly heterogeneous clinically and immunologically, and the precise recognition of the disease's various manifestations may help subdivide patients into subgroups with varying prognostic and therapeutic implications. Therefore, the current study aimed to assess the prevalence and characteristics of retinal manifestations in patients with SLE, with a particular focus on the relationship between visual impairment, retinal drug toxicity (specifically hydroxychloroquine retinopathy), and their implications for clinical management and treatment protocols. This study conducted a retrospective cross-sectional study to assess the prevalence and characteristics of retinal manifestations in patients with SLE. The study spanned 20 years between January 1, 2001, and December 31, 2021, and was conducted in the Internal Medicine department of King Fahad Medical City in Riyadh, Saudi Arabia. In the current study, we collected data from 327 patients diagnosed with SLE. Around 10.8% of patients with SLE had chronic kidney disease in the last three months, evidenced by elevated creatinine serum levels $> 110 \mu\text{mol/l}$ or 1.2 mg/dl. Visual acuity was normal in 99.1% of right eyes and 97.9% of left eyes, with all patients having normal intraocular pressure. The only retinal manifestation identified was hydroxychloroquine retinopathy in 1.2% of patients. No cases of SLE retinopathy or any other drug-related retinal side effects were identified. The majority of patients were prescribed hydroxychloroquine. This research revealed that most SLE patients had normal intraocular pressure and visual acuity, with few instances of hydroxychloroquine retinopathy. Large-scale longitudinal studies are needed to enhance our understanding of the relationship between SLE, medication regimens, and ocular manifestations, along with the effect these factors have on visual outcomes.

Keywords: Prevalence; retina; systemic lupus erythematosus; Saudi Arabia

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