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The Occurrence of Retinopathy in 11 Eyes After a Solar Eclipse, 1999

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Abstract: To present the visual outcome of patients with solar retinopathy and evaluate the effects of treatment on the visual prognosis. One hundred and eighty-eight patients with visual disturbances applied for ophthalmic examination following the solar eclipse on August 11, 1999. All patients underwent routine ophthalmologic examination; those with fundus changes also underwent fundus fluorescein angiography, Amsler grid and computerised perimetry. Among them, nine patients (11 eyes) were evaluated as having solar retinopathy with decreased visual acuity and discernible fundus findings. Mean age was 21.5 (17-34) in this group. Five patients were given treatment, three were on oral methyl prednisolon and two were on ginkgo glycosides. Statistical analysis could not be performed because of the small number of patients in the treatment groups. The duration of exposure was 1-30 min. The mean initial visual acuity was 20/32 (min 20/100, max 20/25). All eyes aside from one revealed positive Amsler grid tests. Computerised perimetry showed central scotoma in four eyes. The mean visual acuity at final examination (3 months later) was 20/24 (min 20/50, max 20/20). Metamorphopsia persisted in five eyes, and disability at near vision persisted in one eye after 3 months. Early and late fundoscopic findings did not correlate with either duration of exposure or visual acuity. Reversible or persistent visual abnormalities may follow a solar retinal burn. Prevention seems to remain the best treatment. Corticosteroids may be beneficial in severe cases.

Key Words: Solar retinopathy, protection, and treatment.

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