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Electrorretinogram Findings in Patients with Acute Retinal Necrosis

Luciana Barbosa Carneiro, Fernando Oréfice, Rubens Belfort Jr. Uveitis Department. Purpose: To study changes in electroretinogram (ERG) caused by acute retinal necrosis secondary to Herpes infection. Methods: Retrospective study. 31 eyes of 28 patients with acute retinal necrosis were examined in Uveitis Department of São Geraldo Hospital, Minas Gerais Federal University. Control group: 57 normal patients. The exams were done following the ISCEV standard. The ERG was done with a full field (Ganzfeld) stimulation and a white light stimulus. Five basic ERG responses were measured: rod response, maximal combined response, oscillatory potentials, single flash cone response, 30-Hz flicker response. The exams were done in the time of diagnosis and repeated after the treatment by the same person. Protocol Treatment: Intravenous acyclovir, oral prednisone, oral aspirin, retina laser photocoagulation to the peripheral retina at the time of diagnosis. The exams were done in EPIC 2000 version 3.10., LKC technologies. Kruskal-Wallis statistical test was used and it was considered significant when $p < 0,05$. Results: 16 male and 12 female. Mean age 34 years, ranged from 14 to 70. Mean visual acuity was 0.3, ranged from 0.9 to hand motion. 09 eyes with late diagnosis and advanced inflammation had ERG exam with no response since the first exam. 22 eyes with early diagnosis had ERG exam with increased implicit time and decreased amplitude at the first exam, and became almost normal in the subsequent exams. Control group presented normal ERG. ERG alterations: a- implicit time increasing of b waves of the rod response, maximal combined response, oscillatory potentials, cone response and flicker; b - increase amplitude of b waves of the rod response, maximal combined response, oscillatory potentials, cone response and flicker. The ERG recordings had significant differences between the control group and the early diagnosis one ($p < 0,05$). Conclusions: The ERG alterations are not specific of the disease, but can suggest the severity of the inflammation and the prognostic of the disease.