Print this Page for Your Records Close Window

Control/Tracking Number: 07-A-4746-ARVO
Activity: Abstract
Current Date/Time: 12/1/2006 12:10:15 PM

Evaluation Of Quantitative Indexes For The Analysis Of Multifocal ERG

Author Block: *J.R. Charlier*[1], *S.Defoort-Dhelemmes*[2], *X.Zanlonghi*[3], *S.Vermandel*[1]. [1]Research, Metrovision, Perenchies, France; [2]Ophthalmology, Lille University Medical Center, Lille, France; [3]Ophthalmology, Clinique Sourdille, Nantes, France.

Abstract:
Purpose: To evaluate the clinical applicability of quantitative indexes for the interpretation of multifocal ERG (MfERG) exams. These indexes have been developed to improve the detection of alterations of MfERG responses. A first set of indexes compares the amplitudes of P1 (related to the activity of inner layers) to the amplitude of N1 (related to the activity of photoreceptors). A second set of indexes compares the amplitudes of central responses to peripheral responses.
Methods: MfERG exams were performed with identical conditions over a reference group of 71 eyes from normal individuals and over a pathological group of 32 eyes with various diseases of the retina. The analysis included: the amplitude of averaged responses over 5 ring areas (0-2, 2-5, 5-10, 10-15 and 15-25 degrees eccentricity). P1/N1 was computed for each averaged response. N1/N1 periphery and P1/P1 periphery were computed for the 4 central rings.
Results: Reference group: variation coefficients were 21% for N1 amplitude, 19% for P1 amplitude. P1/N1 and P1/P1periphery were found to present much lower variation coefficients with values of 12% and 11%, respectively.
Pathological group: In 11 cases out of 32, the spread of deficits was larger with N1/N1periphery than with N1 amplitude alone. In 14 cases out of 32, the spread of deficits was larger with P1/P1periphery than with P1 amplitude alone. In 10 cases P1/N1 was out of the normal range. 3 of these cases had no significant alterations of N1 and P1 amplitudes (1 chloroquine and 2 sabril intoxications).
Conclusions: The use of quantitative indexes such as P1/N1 and P1/P1 periphery can significantly improve the detection and interpretation of alterations of MfERG results.
:

Author Disclosure Block: **J.R. Charlier**, metrovision, E; **S. Defoort-Dhelemmes**, None; **X. Zanlonghi**, None; **S. Vermandel**, metrovision, E.

Reviewing Codes (Complete): 174electroretinography:techniquesdevelopment(clinical)–VN
Presentation Preference (Complete): Poster #1, Paper #2
Keyword (Complete): 506 electroretinography: clinical ; 504 electrophysiology: clinical
Clinical Trial and Newsworthy (Complete):
***Clinical Trial** : No
Clinical Trial Explanation : not an evaluation for therapeutic purpose
***Newsworthy** : No

Support (Complete):
***Support** : None

Status: Complete