



FENS Forum 2010 - Amsterdam

- Posters: to be on display from 8:00 to 13:15 in the morning and from 13:30 to 18:45 in the afternoon.
Poster sessions run from 09:30 to 13:15 in the morning and from 13:30 to 17:30 in the afternoon.

A one hour time block is dedicated to discussion with the authors (authors should be in attendance at their posters as from the time indicated.)

- For other sessions, time indicates the beginning and end of the sessions.

First author Mancebo, Rafael (poster)

Poster board D23 - Sun 04/07/2010, 12:15 - Hall 1

Session 019 - Vision 1

Abstract n° 019.23

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Title Quantitative and qualitative characteristics of visual evoked potentials in patients with retinitis pigmentosa

Text We have studied the effects on pattern reversal visual evoked potential (VEP) of checkerboard that differ in check size (3.75, 7.5, 15, 30, 60 min of arc) in patients with retinitis pigmentosa (RP). The PEV were recorded monocularly. The active electrode was placed at the Oz, the reference electrode at Pz and ground electrode at Cz (impedance below 1 kOhm). The overall stimulus size was 24x32 cm, subtending a visual angle of 11.8x15.6° at a distance of 114.5 cm. Filters setting was in a window of 1 and 100 Hz. With the stimulus contrast kept at 100%, the amplitude of the P100 component of VEP was significantly ($p < 0.005$) reduced in all check sizes in comparison with normal subjects (controls). In RP patients, the mayor amplitude of P100 was obtained with a larger check size (60 min) than in normal subjects (15 min). In comparison with controls, the latency of P100 in RP patients was longer in all stimuli, being significant ($p < 0.005$) with check sizes of 15 and 30 min. In normal subjects, P100 obtained with low contrast stimuli (6 and 16%) showed P100 of low amplitudes and long latencies, similar to that found in RP patients with stimulus at 100% of contrast. These results show first that PEV in RP patients not only have quantitative differences with normal subjects, as previously described (smaller amplitudes and longer latencies of the P100), but also qualitative differences evidenced by the different check size at which the mayor amplitude of the P100 can be recorded. Second, the alterations of VEP in patients may not only depend on attenuation of visual subcortical inputs from a degenerated retina, but also from the difficulty of the visual cortex to synchronize and integrate cortical and subcortical information, and third, the similarities of VEP in RP patients with those obtained in controls at low contrast, suggests an alteration in the cortical processing of contrast sensitivity in RP. In this research the Declaration of Helsinki was followed and informed consent was obtained from all subjects.

Theme D - Sensory and motor systems
Vision - Retina
