Macular Electrophoretogram in Stargardt's Disease/ Fundus Flavimaculatus

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Dear Editor

We appreciate the comments by Gundogan et al. [1] on our paper entitled 'Multifocal electrophoretograms in Stargardt's disease/fundus flavimaculatus', published in *Ophthalmologica* [2]. They asked us to present more details on the full-field electrophoretograms (ERGs) and also to calculate the correlation between the visual amplitudes of the multifocal ERGs' central response, the visual acuity and age for each type of Stargardt's disease/fundus flavimaculatus (SFF) [3].

For full-field ERGs, Itabashi et al. [4] from our laboratory published a detailed report on the retinal function in patients with SFF using the same ERG recording system as was used in our paper [fig. 7 in 4]. The cone responses (photopic b-wave) were significantly reduced in SFF, and the retinal function was the worst in SFF type 3E [4]. The full-field and multifocal ERG findings in our patients [2] are in good agreement with the results presented in the paper by Itabashi et al. [4].

We have also calculated the correlation between the central multifocal ERGs' responses and the best-corrected visual acuity (BCVA) for each type of SFF (fig. 1). As shown in figure 1a, c, no significant correlation was found between the BCVA and the

Fig. 1. Correlation between BCVA and P1 [5] of the multifocal ERGs' central response in each SFF type [3]. **a–d** Types 1–4. **e** Implicit time.

central multifocal ERGs' responses for SFF types 1 and 3, because the responses were at noise level. In eyes with SFF type 2, the response densities of P1 [5] of the multifocal ERGs' central response appeared to be associated with the BCVA, but we did not perform any statistical analysis because of the small number of eyes. In eyes with SFF type 4, both the BCVA and the multifocal ERGs' central responses were well preserved. The implicit times of P1 of the multifocal ERGs' central response were not significantly correlated with the BCVA (fig. 1e). As shown previously [table 1 in 2], the BCVA and the multifocal ERGs' responses appear to depend more on the fundus appearance including SFF type than on age. However, Itabashi et al. [4] reported, for each patient,

that the BCVA in eyes with SFF decreased with increasing age, and 25% of the patients over 40 years became legally blind.

We conclude that analyzing the ERGs is essential in evaluating the retinal function in eyes with SFF, and the amplitudes of the ERGs are well correlated with the type of SFF. Again, we thank Gundogan and colleagues for their interest in our paper.

References

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