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MEETING ABSTRACT Open Access

Does VEGF polymorphism play a role in the treatment success with VEGF inhibitors in patients with CNV?

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Background

Along with risk factors like smoking, hypertension, atherosclerosis and low choroidal blood flow, genetic susceptibility is a primary contributor to the development and progression of wet age-related macular degeneration (AMD). Vascular endothelial growth factor (VEGF) is a central angiogenic regulator and there is general agreement now that it is one of the most important triggers for the progression of neovascular AMD. In the present study we tested the hypothesis that VEGF gene polymorphisms play a role in the treatment success with VEGF inhibitors in patients with CNV.

Methods

One-hundred-sixty-two eyes of 143 patients with neovascular AMD who were scheduled for their first treatment with intravitreally administered ranibizumab were included in this trial. All patients were aged over 50 years and had angiographically verified neovascular AMD. Blood from the finger pad was collected on blood cards for genotyping for the VEGF polymorphisms rs1413711, rs3025039, rs2010963, rs833061, rs699947, rs3024997 and rs1005230. At each follow up visit, visual acuity was reassessed and an ophthalmic examination was carried out. The number of retreatments as well as the visual acuity outcome was analyzed in dependence of the VEGF polymorphisms.

Results

The included patients were reinjected with ranibizumab 2 to 19 times, resulting in a total treatment period of 42 to 1182 days. Neither the number of retreatments nor the visual acuity outcome was associated with any of the studied haplotypes.

Conclusions

The success of anti VEGF treatment is not dependent on VEGF gene polymorphisms.

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