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Efficacy of intravitreal ranibizumab injection in eyes with diabetic macular edema

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Purpose: To evaluate the efficacy of Intravitreal Ranibizumab (IVR) on the Central Macular Thickness (CMT) and Best-Corrected Visual Acuity (BCVA) in eyes with diabetic macular edema (DME).

Methods: The medical records of 49 eyes of 36 patients who were diagnosed with DME and had received IVR treatment in the Chiba University Hospital from March to December in 2014 were re-viewed. The IVR had been injected pro re nata. The CMT and BCVA were measured at 1, 3, and 6 months after the IVR. Thirty-seven eyes were previously treated, with a Sub-Tenon's injection of Triamcinolone Acetonide (STTA), 26 eyes had photocoagulation for microaneurysms, 16 eyes had panretinal photocoagulation, and 2 eyes had pars plana vitrectomy.

Results: The mean age of the patients was 62.6 ± 1.0 years, the mean HbA1c was 7.9%, the mean injection times of IVR were 2.6 ± 1.0 times for 6 months and the mean duration of the DM was 12.3 ± 11.9 years. The CMT was $535.9 \mu\text{m}$ before treatment, $408.6 \mu\text{m}$ at 1 month, $418.0 \mu\text{m}$ at 3 months, and $462.5 \mu\text{m}$ at 6 months after the IVR. The CMT was still significantly thinner at 6 months after the IVR ($P < 0.05$). The mean BCVA in log MAR units was 0.48 before IVR, 0.41 at 1 month, 0.39 at 3 months, and 0.42 at 6 months after the IVR. The BCVA was significantly improved only at 3 months after the IVR ($P < 0.05$). The CMT of eyes with serous retinal detachment (SRD) was still significantly thinner at 6 months, and the BCVA was significantly improved only at 3 months after the IVR. In eyes without SRD, the CMT and BCVA were significantly improved only at 3 months after the IVR. In eyes with the previous STTA treatment, the CMT was significantly thinner during the observation period but the BCVA was not significantly improved at any time after the IVR.

Conclusions: The results indicate that the duration of the effectiveness of IVR is different for the CMT and BCVA; 6 months for the CMT and 3 months for the BCVA. The effectiveness of IVR was not dependent on the presence of a SRD. Our findings suggest that IVR may be effective in reducing the CMT in DM eyes refractory to STTA.

Biography

Norihiro Shimizu graduated from Chiba University School of Medicine at the age of 26 years old. He is a medical doctor of Ophthalmology and working as a senior resident at Chiba University Hospital.

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