Outcomes of Eyes with Diabetic Macular Edema that are Lost to Follow-up after Anti-Vascular Endothelial Growth Factor Therapy

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Purpose:
To evaluate the visual and anatomic outcomes of eyes with diabetic macular edema (DME) treated with anti-vascular endothelial growth factor (VEGF) injections who had a prolonged period of loss to follow-up (LTFU) before returning.

Methods:
Patients seen from 7/15-2/18 with non-proliferative diabetic retinopathy (NPDR) and DME treated with anti-VEGF injections who were LTFU for >6 months at a single center were evaluated. Visual acuity (VA), NPDR severity, and optical coherence tomography (OCT) metrics were collected from the visit before LTFU, the first return visit, 3 months after return, 6 months after return, 12 months after return, and the final visit.

Results:
Of 57 eyes from 43 patients eligible for inclusion, mean age was 63.4 years, mean LTFU time was 373 days and mean follow-up time after return was 354 days. The mean number of injections prior to LTFU was 8.7 and after return was an additional 5.4. Compared to the mean logMAR VA at the visit before LTFU (0.41, Snellen ~20/51), there was worsening found at the return visit (0.55, Snellen ~20/71, p=0.001), the 12-month after return visit (0.44, Snellen ~20/55, p=0.004), and the final visit (0.47, Snellen ~20/61, p=0.04). When analyzed by NPDR severity before LTFU, no significant difference was found in the mean logMAR VA in the mild or moderate groups from the visit before LTFU to the final visit. However, eyes with severe NPDR demonstrated significant worsening when comparing the visit before LTFU (0.42, Snellen ~20/53) with the final visit (0.64, Snellen ~20/87, p=0.02). Mean central foveal thickness (CFT) increased when comparing the visit before LTFU (279 μm) to the return visit (323 μm, p=0.02). No significant difference in the mean CFT was seen by the 3-month after return visit (279 μm, p=0.85), the 6-month after return visit (264 μm, p=0.73), the 12-month after return visit (285 μm, p=0.16), and the final visit (290 μm, p=0.71).

Conclusions:
Anti-VEGF treated DME patients who were LTFU for a prolonged period experienced a modest decline in VA that improved after restarting therapy but did not fully return to the pre-treatment break level despite improvement in macular edema.