Comparison of Treatment Outcomes Among Subtypes of Polypoidal Choroidal Vasculopathy in a multicenter randomized controlled study (EVEREST study)

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Purpose: To evaluate the frequency and characteristics of polypoidal choroidal vasculopathy (PCV) subtypes among patients from a multicenter randomized controlled trial, and to determine the impact of the subtypes on clinical outcomes.

Methods: Sixty patients with macular PCV from the EVEREST Study were analyzed. The diagnosis of PCV was confirmed by a Central Reading Center using standardized indocyanine green (ICGA) and fluorescein angiography (FA). Type A PCV had polyps with interconnecting channels, Type B had polyps with branching vascular networks with no leakage on FA, and Type C had polyps with branching vascular networks with significant leakage on FA. The visual acuity (VA) and central retinal thickness (CRT) of the PCV subtypes were evaluated.

Results: Of the 54 patients who were gradable for PCV subtype, 8 had Type A PCV (14.8%), 27 had Type B (50%) and 19 had Type C (35.2%). Both VA and reduction in retinal thickness varied significantly with PCV subtype. At month 6, Type A PCV had the best VA compared to Types B and C (80.1 letters vs. 67.2 vs. 50.4 respectively, p<0.001). Type A PCV gained 13 letters vs. 8.5 (Type B) and 6.9 (Type C) (p<0.001). The proportion of patients with VA ≥20/40 was highest for Type A compared to Types B and C (100% vs. 51.9% vs. 10.5%, p<0.001). Post treatment, the CRT was thickest for Type C PCV.

Conclusions: The PCV subtype affects visual outcomes following treatment. This PCV subtype classification is useful in prognosticating patients presenting with PCV.