

R1  R2  R3  PG0  PG1  Estagiário  Tecnólogo  PIBIC

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### **Clinically Significant Macular Edema and Survival in Type 1 and Type 2 Diabetes: Wisconsin Epidemiologic Study of Diabetic Retinopathy**

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**Purpose:** to investigate the association of clinically significant macular edema and long-term survival in individuals with type 1 and type 2 diabetes.

**Methods:** the Wisconsin Epidemiologic Study of Diabetic Retinopathy (WESDR) is an ongoing prospective population-based cohort study initiated in 1980-82 of individuals with diabetes diagnosed at either < 30 years of age (younger-onset, n=996) or ≥ 30 years of age (older-onset, n=1,370). Stereoscopic color retinal photos were graded for retinopathy using the modified Airlie House Classification scheme and CSME was defined by ETDRS criteria.

**Results:** prevalence of CSME was 5.9% and 7.5% for the younger- and older - onset groups, respectively. After 20 years of follow-up, 276 younger-onset and 1,123 older-onset persons died. When adjusting for age and gender CSME was not significantly associated with all-cause (hazard ratio and 95% confidence interval 1.41 (0.96-2.07), p=0.08) or ischemic heart disease mortality (1.14 (0.61-2.12), p=0.68) in the younger-onset group. In the older onset group, there was increased all-cause and ischemic heart disease mortality when CSME was present: 1.55 (1.25-1.92), p<0.01 and 1.56 (1.15-2.13), p<0.01, respectively, when adjusting for age and gender. After controlling for other risk factors, the association remained significant for ischemic heart disease (1.58 (1.07-2.35), p=0.02) among those taking exogenous insulin. CSME was not significantly associated with stroke mortality by in either group.

**Conclusions:** CSME appears to be a risk indicator for decreased survival in persons with older-onset diabetes mellitus. The presence of CSME may identify individuals who should be under care for cardiovascular disease.