Statins, History of Hypercholesterolemia & Dementia Risk in the Oldest-Old: Results from The 90+ Study

Presented by

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Background: Epidemiological studies suggest that hypercholesterolemia measured at midlife (age 50-65) is associated with increased dementia risk, and statin cholesterol-lowering therapy is associated with lower dementia risk. This association may change with age and statin use in the oldest-old, people age 90+, may result in greater or lesser risk of dementia than in younger age groups. The oldest-old are the most rapidly growing segment of the population and are at the most risk of dementia, so decreasing incident dementia in this age group is critical. Objective: To determine whether history of hypercholesterolemia and statin use in the oldest-old are associated with dementia risk. Design: The 90+ Study is an observational population-based cohort study of aging and dementia. People who currently or previously lived in a Southern California retirement community were eligible upon reaching age 90. 589 individuals without dementia at baseline were enrolled between October 2002 and January 2013, and were followed for up to 10 years (mean=3 years). Exposure(s): History of hypercholesterolemia was self-reported by participants, and statin use was assessed via direct medication bottle examination at each in-person visit repeated every six months. Main Outcome & Measure(s): Age at dementia diagnosis Results: Participants averaged 93 years of age at baseline (range 90-103), 70% were women (n=412), 25% were statin users (n=145), 36% reported a history of hypercholesterolemia (n=209), and 41% of participants developed dementia (n=243). Cox regression models showed that a reported history of hypercholesterolemia was associated with a trend towards lower dementia risk: hazard ratio (HR)=0.78, 95% confidence interval (CI)=0.59-1.03, p=0.08. Statin use was significantly associated with lower dementia risk (HR=0.65, CI=0.46-0.91, p=0.01), both in individuals with (HR=0.67, CI=0.46-0.97, p=0.03) and without (HR=0.43, CI=0.19-0.97, p=0.04) a reported history of hypercholesterolemia. Conclusions: Results from this study indicate that statin use in nonagenarians is associated with lower dementia risk. Further investigation should examine whether statin therapy at age 90+ may prevent or retard the progression of dementia in this rapidly-growing segment of the population.