Life Expectancy Lower With Combination of Diabetes, Stroke, or Heart Attack

According to a study published in JAMA, analysis of nearly 1.2 million participants and more than 135,000 deaths showed that mortality associated with a history of diabetes, stroke, or heart attack was similar for each condition, and the risk of death increased substantially with each additional condition a patient had.

Prevalence of cardiometabolic multimorbidity in showing a rapid increase. There is sufficient evidence to show the mortality risk of having any 1 of these conditions alone. However, evidence related to life expectancy among people who have 2 or 3 cardiometabolic conditions at the same time is still insufficient.

During this study, John Danesh, F.Med.Sci., of the University of Cambridge, England, and colleagues estimated reductions in life expectancy associated with cardiometabolic multimorbidity. Age- and sex-adjusted mortality rates and hazard ratios (HR) were calculated using individual participant data from the Emerging Risk Factors Collaboration (689,300 participants; 91 cohorts; years of baseline surveys: 1960-2007; latest mortality follow-up: April 2013; 128,843 deaths). The hazard ratios from this study population were compared with those from the UK Biobank (499,808 participants; years of baseline surveys: 2006-2010; latest mortality follow-up: November 2013; 7,995 deaths).

Primary findings of the study include:

- Participants who had one condition had about twice the rate of death; two conditions about four times the rate of death and three conditions about eight times the rate of death. "Our results emphasise the importance of measures to prevent cardiovascular disease in people who already have diabetes, and, conversely, to avert diabetes in people who already have cardiovascular disease," the authors write.
- Reductions in life expectancy associated with cardiometabolic multimorbidity are of similar magnitude to those previously noted for exposures of major concern to public health, such as lifelong smoking (10 years of reduced life expectancy) and infection with the human immunodeficiency virus (11 years of reduced life expectancy).
- Modification by sex of associations between cardiometabolic multimorbidity and mortality were noted during the study. For men, the association between baseline cardiovascular disease and reduced survival was stronger than for women, while the association between baseline diabetes and reduced survival was stronger for women. Approximately 60 percent of the years of life lost from cardiometabolic multimorbidity can be attributed to cardiovascular deaths for men compared with only about 45 percent for women.

The findings of the study highlight the need to balance the primary prevention and secondary prevention of cardiovascular disease. Approximately 10 million adults in the U.S. and the European Union are living with cardiometabolic multimorbidity. However, the authors write that "an overemphasis on the substantial reductions in life expectancy estimated for the subpopulation with multimorbidity could divert attention and resources away from population-wide strategies that aim to improve health for the large majority of the population."

Source: JAMA
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