Hormone Replacement Therapy Decreases Mortality In Younger Postmenopausal Woman, Study Shows

ScienceDaily (Oct. 29, 2009) — Hormone replacement therapy (HRT) to treat menopausal estrogen deficiency has been in widespread use for over 60 years. Several observational studies over the years showed that HRT use by younger postmenopausal women was associated with a significant reduction in total mortality; available evidence supported the routine use of HRT to increase longevity in postmenopausal women. However, the 2002 publication of a major study, the Women's Health Initiative (WHI), indicated increased risk for certain outcomes in older women, without increasing mortality. This sparked debate regarding potential benefits or harm of HRT. In an article published in the November 2009 issue of *The American Journal of Medicine,* researchers conducted a meta-analysis of the available data using Bayesian methods and concluded that HRT almost certainly decreases mortality in younger postmenopausal women.

Bayesian analysis uses prior data, updated with new information, to make statistical inferences. The authors pooled results from 19 randomized trials that included age-specific data from the WHI, with 16,000 younger postmenopausal women (mean age 55 years) followed for 83,000 patient-years, and showed a mortality relative risk of 0.73. When data from 8 observational studies were added to the analysis, the resultant relative risk was 0.72. Using Bayesian analysis to synthesize the available data, the probability of a mortality benefit in this population was 1.0. This means that the probability of the hypothesis that hormone therapy reduces total mortality in younger women is essentially

Writing in the article, Shelley R. Salpeter, MD, states, "It is clear that these findings need to be interpreted in the light of potential benefits and harms of hormone therapy. The available evidence indicates that hormone therapy in younger postmenopausal women increases the risk of breast cancer and pulmonary embolism and reduces the risk of cardiovascular events, colon cancer, and hip fracture. The cardiovascular benefit is a result of a small absolute increase in stroke and a greater reduction in coronary heart disease events. The total mortality benefit for younger women seen in the randomized trials and observational studies indicates that the reduction in deaths from coronary heart disease, fracture, and colon cancer outweighed the increase in deaths from breast cancer, stroke and pulmonary embolism. In addition to this mortality benefit, hormone therapy in younger women provides an improvement in quality-of-life measures, at least in the first few years of treatment."