

VENOUS THROMBOEMBOLISM

30-YEAR RISK OF DEATH AFTER VTE

Venous thromboembolism (VTE) is associated with a short-term increased risk of death, but a new study from Kirstine Sjøgaard and colleagues now indicates that mortality is increased up to 30 years after the index event. This long-term elevated risk highlights the importance of treatment and the use of secondary prevention measures in patients with VTE.

VTE incorporates deep-vein thrombosis (DVT) and pulmonary embolism (PE). According to data from 1980 to 2011 in Danish medical databases, 74,157 individuals had a first-time diagnosis of DVT, and 54,066 had a first-time diagnosis of PE. These 128,223 patients were randomly matched according to sex, age, and calendar period of diagnosis with 640,760 individuals from the general population without a diagnosis of VTE.

As expected, the 30-day rate of death was increased among patients with DVT, and markedly so among those with PE, compared with the general population (adjusted mortality rate ratio [MRR] 5.38, 95% CI 5.00–5.80 for DVT; MRR 80.87, 95% CI 76.02–86.02 for PE). Over the 30-year period of the study, the 30-day MRR for DVT remained fairly consistent, whereas the 30-day MRR for PE declined from 138 in the 1980s to 36 in the 2000s, perhaps indicating improvements in treatment for PE or identification of less serious embolisms. MRRs for patients surviving >1 year remained elevated for both DVT and PE, but the difference between the groups was reduced. The MRRs within 1–10 years and 11–30 years of diagnosis were 36% and 31% higher for DVT, and 41% and 24% higher for PE, compared with the general population.

“The mechanism behind the increased long-term mortality risk remains to be further investigated,” say the researchers, “but is likely to reflect both the severity of underlying disease as well as a VTE-associated excess mortality.” Patients with VTE have an increased risk of developing cancer and cardiovascular disease, but the results of this study indicate that pneumonia and recurrent VTE are also important causes of death. Dr Sjøgaard believes that a need exists for “individual patient counselling with focus on optimizing the treatment of VTE, as well as reducing risk factors for VTE recurrence to ... prevent VTE-related death”.

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Original article Sjøgaard, K. K. *et al.* 30-Year mortality following venous thromboembolism: a population-based cohort study. *Circulation* doi:10.1161/CIRCULATIONAHA.114.009107