Decline in Overall Pulmonary Embolism-Related Mortality and Increasing Prevalence of Cancer-Associated Events in the Veneto Region (Italy), 2008-2019

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Abstract

Background
Despite evidence of ongoing epidemiological changes in deaths from venous thromboembolism in high-income countries, little recent information is available on the time trends in mortality related to pulmonary embolism (PE) as underlying or concomitant cause of death in Europe.

Methods
We accessed the regional database of death certificates of Veneto Region (Northern Italy, population 4,900,000) from 2008 to 2019. We analyzed the trends in crude and age-adjusted annual rates of mortality related to PE (reported either as underlying cause or in any position in the death certificate) using Joinpoint regression; in the contribution of PE to mortality (proportionate mortality); and, using logistic regression, in the association between PE and cancer at death.

Results
Between 2008 and 2019, the annual age-standardized mortality rate related to PE in Veneto decreased from 20.7 to 12.6 deaths per 100,000 population for PE in any position of the death certificate, and from 4.6 to 2.2 deaths per 100,000 population for PE as underlying cause of death. PE-related proportionate mortality remained up to twice as high in women. The age- and sex-adjusted odds ratio for cancer in deaths with versus without PE constantly increased from 1.01 (95% confidence interval [CI]: 0.88-1.16) in 2008 to 1.58 (95% CI: 1.35-1.83) in 2019.

Conclusion
The descending trends in PE-related mortality reported for Europe up to 2015 for both sexes continued thereafter in this high-income region of Northern Italy. However, sex differences in proportionate mortality persist. The increasing strength in the association between cancer and PE may indicate a change in risk factor distribution, calling for tailored management practices in this patient group.

FULL TEXT
https://pubmed.ncbi.nlm.nih.gov/34255341/