Mortality Associated with Idiopathic Pulmonary Fibrosis in Northeastern Italy, 2008-2020: A Multiple Cause of Death Analysis

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Marcon A, Schievano E, Fedeli U

Abstract

Mortality from idiopathic pulmonary fibrosis (IPF) is increasing in most European countries, but there are no data for Italy. We analysed the registry data from a region in northeastern Italy to assess the trends in IPF-related mortality during 2008-2019, to compare results of underlying vs. multiple cause of death analyses, and to describe the impact of the COVID-19 epidemic in 2020. We identified IPF (ICD-10 code J84.1) among the causes of death registered in 557,932 certificates in the Veneto region. We assessed time trends in annual age-standardized mortality rates by gender and age (40-74, 75-84, and ≥85 years). IPF was the underlying cause of 1310 deaths in the 2251 certificates mentioning IPF. For all age groups combined, the agestandardized mortality rate from IPF identified as the underlying cause of death was close to the European median (males and females: 3.1 and 1.3 per 100,000/year, respectively). During 2008-2019, mortality rates increased in men aged ≥85 years (annual percent change of 6.5%, 95% CI: 2.0, 11.2%), but not among women or for the younger age groups. A 72% excess of IPF-related deaths was registered in March-April 2020 (mortality ratio 1.72, 95% CI: 1.29, 2.24). IPF mortality was increasing among older men in northeastern Italy. The burden of IPF was heavier than assessed by routine statistics, since less than two out of three IPF-related deaths were directly attributed to this condition. COVID-19 was accompanied by a remarkable increase in IPF-related mortality.

Keywords: COVID-19; epidemiology; idiopathic pulmonary fibrosis; mortality; multiple cause of death; time trends analysis; underlying cause of death.

FULL TEXT

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