Parkinson's disease related mortality: Long-term trends and impact of COVID-19 pandemic waves

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Abstract

Introduction
Parkinson's disease (PD) mortality burden is increasing worldwide, but accurate estimates on the magnitude of the impact of the COVID-19 pandemic are missing. Mortality rates vary largely when considering PD as underlying cause of death (UCOD), or as one among multiple causes reported in death certificates (MCOD). The aim of this study is to assess COVID-19 impact on PD-related mortality trends using the UCOD and MCOD approach.

Methods
Mortality records between 01/2008-12/2020 of residents aged ≥45 years in Veneto Region (Northeastern Italy) with any mention of PD were collected. Age-standardized sex-specific mortality rates were estimated for PD-related deaths as UCOD and MCOD to assess time trends. The average annual percentage change in age-standardized rates (AAPC) was estimated by linear regression models. Monthly mortality in 2020, the first year of the pandemic, was plotted against the 2018-2019 average.

Results
Overall, 13,746 PD-related deaths (2.3% of all deaths) were identified, 52% males, median age 84 years. Proportional mortality increased from 1.9% (2008) to 2.8% (2020). AAPC through 2008-2019 was +5.2% for males and +5.3% for females in analyses of the UCOD, and +1.4% in both genders based on MCOD. Excess in PD-related mortality during 2020 corresponded to 19% for UCOD and 28% for MCOD, with the latter showing two peaks corresponding to the first (28%) and second (59%) pandemic waves.

Conclusion
Age-standardized PD-related mortality rates have steeply increased during COVID-19 pandemic, amplifying a pre-existing long-term trend. Hence, surveillance of mortality associated to PD is warranted in the forthcoming pandemic and post-pandemic years.

FULL TEXT
https://pubmed.ncbi.nlm.nih.gov/35490543/