

Sepsis-related mortality: long-term trends in Northeastern Italy, including pandemic years

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Background

Global estimates of sepsis mortality are based on multiple causes of death (MCOD, any mention of the condition on death certificates); however, MCOD data are sparse and mainly referring to the pre-pandemic period.

Objectives

To investigate recent trends in sepsis-related mortality, associated sites of infection, and comorbidities in Veneto (Northeastern Italy).

Methods

Mortality records from 2008 to 2022 were extracted, and sepsis-related mortality was assessed based both on the underlying cause of death (UCOD) and on MCOD. The average annual percent change in age-standardised rates was estimated by join point regression through the whole study period. MCOD records were investigated to retrieve infection sites and comorbidities.

Results

Sepsis was mentioned in 63,479 death certificates, growing from 4.9% out of all deaths in 2008 to 12.9% in 2022. Age-standardised mortality rates increased yearly by 8.2% (95%CI 2.1-14.7%) based on the UCOD and by 5.9% (95%CI 5.3-6.5%) based on MCOD. Sharp peaks in monthly mortality were observed in correspondence with flu epidemics, COVID-19 pandemic waves, and periods of extreme heat. The percentage of sepsis-related deaths associated to urinary tract infections, and with mention of neurodegenerative disorders and chronic kidney disease increased over time.

Conclusion

Raised awareness of physicians, ageing of the population, spread of antimicrobial resistance further fuelled by the COVID-19 pandemic are among reasons of increasing sepsis-related mortality in Italy. Continuous monitoring of sepsis by means of MCOD data and other surveillance tools is warranted.

Keywords: COVID-19; Sepsis; antimicrobial resistance; mortality; multiple causes of death.

FULL TEXT PER GLI UTENTI REGISTRATI ALLA RIVISTA

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