Abstract: P6137

Trends in mortality of sudden cardiac death in Brazil

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Topic(s):
Public Health

Citation:
Background: Sudden cardiac death (SCD) is the most feared manifestation of heart disease. In the past few decades, substantial progress has been made in our understanding of SCD and in its prevention. However, there is no data concerning population incidence of SCD in Brazil.

Purpose: To estimate trends of mortality for SCD in Brazil between 1996 and 2015.

Methods: Data from death certificates in Brazil from 1996 to 2015 were obtained by consulting the Mortality Information System (SIM) national database. SCD was defined as deaths occurring out of the hospital (residence or public way) with an underlying cause of death reported as a cardiac disease (ICD-9 code 390-398, 402, or 404-429; ICD-10 code I00-I09, I11, I20-I51). Annual death rates (deaths/100,000 inhabitants) were calculated for the population aged ≥ 20 years and standardized by the direct method to the 2010 Brazilian Census population. Trend analyses in the period were performed using Poisson regression.

Results: In 2015, there were 200,372 cardiac disease deaths among Brazilian adult population, of which 63,390 (31.6%) were defined as SCD. Over this 20-years period, 1,002,648 deaths were attributed to SCD, and coronary heart disease was the underlying cause on 59% of death certificates. The adjusted mortality rate ranged from 52.9 in 1996 to 39.7 deaths/100,000 inhabitants in 2015 (R²=0.685, P<0.001). This reduction in SCD mortality was more pronounced among women (50.4 to 34.0 deaths/100,000 inhabitants; R²=0.785, P<0.001) than men (59.7 to 49.9 deaths/100,000 inhabitants; R²=0.477, P=0.03). With the exception of individuals aged 20 to 39 years, in the all other age groups this reduction in mortality was also significant.

Conclusions: This data gives an insight into the pattern of SCD deaths in a big developing country. Despite the inherent limitations in collecting information based on death certificates, in addition to the absence of a clear national standardized definition of SCD, it is possible to affirm that there was a reduction in mortality due to SCD in the last 20 years in Brazil. Prospective surveillance programs would enable more accurate determination of SCD burden in the community.