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Implantable electrical devices for prevention of sudden cardiac death: data on implant rates from a 'real world' regional registry.

Boriani G, Berti E, Biffi M, Marino M, Sassone B, Villani GQ, Bottoni N, Malavasi VL, Melandri F, Barbato G, Talamonti E, Marconi M; RERAI (Registry of Emilia Romagna on Arrhythmia Interventions) Investigators.

Collaborators (55)

Institute of Cardiology, University of Bologna, Azienda Ospedaliera S. Orsola-Malpighi, Bologna, Italy.
giuseppe.boriani@unibo.it

Abstract

AIMS: International and national consensus guidelines define appropriate indications for implantable cardioverter-defibrillators (ICDs), but the variability in implant rates in 'real world' clinical practice is still unknown.

METHODS AND RESULTS: In Emilia-Romagna, an Italian region with around 4.3 million inhabitants, a web-based registry was instituted to collect data for all ICDs implanted. Between January 2006 and December 2008, data from all consecutive patients resident in this region who underwent first implant of an ICD or a biventricular ICD were collected and standardized, considering each regional area (i.e. each of the nine provinces). The overall number of implanted ICDs had an increase in years 2007 and 2008, with a relative increase in comparison to 2006, by 14 and 48% respectively, reaching an average value of 16.2 per 10,000 inhabitants in 2008. Most of the increase was due to a rise in ICDs for primary prevention. The ratio between the implant rates of the provinces with the highest and the lowest implant rates, respectively, was around 2 in 2008.

CONCLUSION: Implant rates for ICDs, considering both primary and secondary prevention of sudden death, show up to two-fold variations even in a geographical region where the general level of health care is advanced and well appreciated by the population. The lack of a common strategy for sudden death prevention, approved by both physicians and institutional regional authorities, together with some degree of variability in translating guidelines into clinical practice, were identified as the main factors explaining the heterogeneity in ICD implant rates.