

EDITORIAL ARTICLE

PERMANENT CARDIAC PACEMAKER

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Cardiac pacemaker is a device largely used to the treatment of heart rhythm problems.¹ Though the first pacemaker was implanted in 1950, it is estimated that 3 million people worldwide have a pacemaker and about 600 thousand pacemakers are implanted annually.^{2,3}

In 2004, about 179.000 new pacemakers were implanted the United States⁴ while in Australia, 9782 cardiac pacemakers were inserted during 1995–2009, with prevalence rates rising from 186 to 469 per 100 000 during this period.⁵ A worldwide cardiac pacing survey which took place in 2009 and were enrolled 61 countries: 25 from Europe, 20 from the Asia Pacific region, 7 from the Middle East and Africa, and 9 from the Americas showed that 1.002.664 already recipients, 737.840 new implants and 264.824 replacements. The majority of cardiac pacemaker implants (225,567) was recorded in United States and the highest number of new implants per million population was

recorded in Germany (927). The indications for implantation were atrioventricular block and sick sinus syndrome.⁶

It is noteworthy that implantation rates per million vary globally while single chamber atrial pacing is be almost ignored, except in Denmark, Lithuania, Norway, Russia, Slovak Republic, and Sweden.⁸ Rates of permanent pacemaker insertion increase with age, and according to estimates 70–80% of all these devices have been implanted in patients 65 years of age or older. Strikingly more, since ageing is associated with increases in arrhythmias disorders, the implantation rates are also expected to rise along with the demand for electrophysiology/pacing services.⁵

The insertion of a permanent cardiac pacemaker is today one of the most commonly performed interventions on the heart. Nevertheless, this cardiac device that saves life threatening arrhythmia, alleviates symptoms, improves quality of life, and increase survival, is imposing at the same time a

number of precautions in patients' daily lives, thus requiring psychosocial adaptation.¹

Though, nowadays there are available leadless pacemakers which are a less invasive approach for patients compared to traditional pacemaker procedures, however, the majority of individuals over 65 years old are still having devices of older technology, thus requiring special care such as avoidance of standing too near to certain appliances, and exposure to metal detectors or electrical generators, etc.

Cardiac rehabilitation combining exercise training and psycho-educational interventions improves exercise capacity, quality of life, and mental health.⁷

Education is a key-element that enhances individuals' knowledge on a wide

range of pacemaker related issues and alleviates several concerns about safety, effectiveness of the device and prevention of complications. Recipients do not only have to adopt a new lifestyle according to the demands of the pacemaker, but also to deeply understand the necessity of the long term treatment including monitoring of the device and battery replacement as they last between 5 and 15 years.⁵⁻⁸

Nurses are encouraged to fulfill patient's needs in the clinical setting where they are easily accessible.⁹ Follow up should be scheduled before hospital discharge to prevent re-hospitalizations and to maximize therapeutic intervention since at home there is a difficulty in systematic monitoring.

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