Trends in Pacemaker Implantation at a Tertiary Care Referral Hospital from South India: A decade in review.

Sinam Inaotan Singha
Deepak Padmanabhan
Bharatraj Banavalikar
Sanjai P V
Milan Kumar Ghadei
Muzaffar Ali
Jayaprakash Shenthar

**Introduction** : There is very little data on the pattern of pacemaker implantation and the reimbursement from Indian subcontinent. We reviewed the data over the last 10 years to ascertain if there was a change in practice pattern.

**Methods** : We reviewed the database of the pacemaker implantation records at Sri Jayadeva Institute of Cardiovascular Sciences and Research, Bengaluru, South India, a tertiary care teaching institute. The data were analyzed for demographics such as the indications, age and sex distribution and payment structure over a 10-year period.

**Result** : A total of 3277 patients, 1855 males (57%) and 1422 females (43%) with a mean age of 62 + 16.3 years (9 months to 99 years) underwent pacemaker implantation between 2008-2018. The yearly trend of sex distribution is depicted in figure 1a. The indications were acquired AV block (AVB) in 2470 (75%), sick sinus syndrome in 534 (16%), tri- and bifascicular blocks with syncope in 121 (4%), post-operative CHB in 57(2%), and congenital CHB in 95 (3%). The reimbursement patterns for the implantation is shown in figure 1b. Univariate analysis revealed a significant increase in the number of implants (194 vs. 536), the contribution of government insurance schemes (51% vs. 69%; P value<0.0001), and the percentage of patients >60 years of age (49% vs. 65%; P value<0.0001) and older women > 60 years (43% vs. 61%;P value=0.0046) has increased significantly from 2008 to 2018 predominantly due to government insurance cover. There is a progressive decrease in out of pocket (OOP) expenditure (41% vs. 26%; P value=0.0001) and donated devices from 2008 as compared to 2018 (8% vs.0.2%; P value <0.0001). However, there was no significant change in the use of private health insurance in the same period (8% vs. 5%; P value=0.125)

**Conclusion** : There is a significant change in the demographics of pacemaker implantation over a 10-year period. The change is driven by increasing patient coverage by government insurance schemes. The government insurance has benefitted older patients and especially women.