BioSpect
the business of Bi
24 years of leveraging the business of Bio
www.biospectrumindia.co

ICD reduces mortality amongst patients at risk of SCA: IMPROVE SCA Study

06 February 2019 | News

In the IMPROVE SCA study, physician researchers in 17 countries considered four previously documented, additional risk factors of SCA, to determine whether they might predict an increased risk of SCA



IMPROVE SCA study which is the largest prospective study of patients at risk of SCA in emerging countries with 4,000 study patients from 17 countries including India, has revealed that primary prevention ICD patients at high-risk of SCA and implanted with ICDs had 49% relative risk reduction in mortality, compared to those without ICD implant.

Sudden cardiac arrest (SCA) is an abrupt loss of heart function that might lead to death within minutes. Community based studies in India have shown that Sudden Cardiac Death (SCD) constitutes around 10% of total mortality in India. Ventricular arrhythmia is reported to be the leading cause of SCD.

The prevalence of Coronary Artery Disease (CAD) has been estimated to be 7-10% in urban areas and 3-5% in rural areas. Patients of acute coronary syndromes in India reported to be predominantly male (>70%), relatively younger (mean age of 57 years) with more presence of additional risk factor like hypertension and diabetes compared to those of western countries.

The medical community has established guidelines endorsing the use of ICDs in patients who have survived an SCA episode (known as secondary prevention), as well as in those who have not previously experienced, but are at risk of, a life-threatening heart rhythm (known as primary prevention).

Despite the burden of SCD, ICDs are underutilized amongst eligible patients in emerging countries like India. Benefit of ICDs for secondary prevention of SCA is well recognized in the emerging countries; however, because they were not included in landmark studies of ICDs for primary prevention, the benefit in these patients is not well quantified.

In the IMPROVE SCA study, physician researchers in 17 countries considered four previously documented, additional risk factors of SCA, to determine whether they might predict an increased risk of SCA. These four risk factors include non-sustained ventricular tachyarrhythmias; frequent premature ventricular contractions (extra heart beat originating from one of the lower chambers of heart); Left ventricular ejection fraction (a measure of the heart's pumping capacity) of less than 25 percent; and syncope, also known as fainting.

Primary prevention patients with one or more risk factors were termed – "1.5 primary prevention" i.e. at higher risk. The results of the study were presented at the recent Asia Pacific Heart Rhythm Society (APHRS) Congress in Taiwan, the largest gathering of physicians in the Asia Pacific region in the field of cardiac electrophysiology and arrhythmia management. The results were also presented at Indian Heart Rhythm Society congress held in Jaipur last month.

According to Dr. B. Hygriv Rao, Senior Consultant Cardiologist & Electrophysiologist, Krishna Institute of Medical Sciences, Hyderabad and one of the principal investigators of the study, "In India, every year approximately 7 lakh individuals die suddenly, and this number is progressively increasing. Many of these individuals are around 60 years of age. It is important for physicians and cardiologists to identify patients who can be protected from sudden cardiac death by ICD therapy. The use of ICD therapy to prevent SCA remains underutilized amongst eligible patients and appropriate prescription of this therapy can save many lives."

According to Dr. Balbir Singh, Chairman Electrophysiology and Pacing, Heart Institute at Medanta, The Medicity, Gurgaon and member of global steering committee representing India, "In relevance to clinical practice in India for SCA patients; not all the patients at high risk of SCA episode receive implant therapy or are well informed about the preventive options. The IMPROVE SCA study for the first time identified a high-risk group prone to sudden cardiac episode and the data confirm the mortality benefits of ICD therapy and aligned with past landmark studies, now with data from regions where prospective evidence on the benefits of ICDs in preventing SCA had previously been limited"

The study enrolled 3,889 analysable patients of which 818 patients were from India. Data from the study confirms the mortality benefits of ICD therapy in a primary prevention population and align with past randomized trials.