Capsule Commentary on Al-Khatib et al., Future Research Prioritization: Implantable Cardioverter Defibrillator Therapy in Older Patients

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Implantable cardioverter defibrillators (ICDs) have been consistently shown to reduce mortality rates in patients who survive ventricular arrhythmias or cardiac arrest (secondary prevention). In primary prevention of sudden cardiac death (SCD), the use of an ICD is recommended in selected patients with systolic heart failure (ischemic or non-ischemic cardiomyopathy with New York Heart Association [NYHA] functional class II or III and left ventricular ejection fraction [LVEF] $\leq 35\%$, or post-ischemic heart disease with NYHA class I and LVEF $\leq 30\%$), receiving optimal medical therapy and with life expectancy of more than 1 year.¹

Congestive heart failure is highly prevalent among older people and is the most common reason for hospitalization. However, this cohort of patients is under-represented in clinical trials evaluating ICD placement as well as cardiovascular drugs.² Older patients often have several comorbidities and are at higher risk of experiencing drug-related adverse effects, peri-procedural complications, and non-cardiac death. Furthermore, a recent study showed that the survival benefit associated with primary-prevention ICDs, although persisting in all age categories, declines with advancing age.³ Hence, there is a general need to increase the enrollment of the geriatric population in clinical trials, and specifically, to identify which older patients may benefit the most from ICDs in the primary prevention of SCD.

Al-Khatib and colleagues developed a prioritized agenda for future research regarding ICD implantation in older patients.⁴ Through the engagement of 18 stakeholders representing different perspectives and a forced-ranking prioritization method, they identified 12 areas of evidence gaps, which included the safety and effectiveness of ICDs in the

elderly, the outcomes associated with different ICD devices, different modes of death or predictors of SCD in the elderly, the impact of ICDs on the quality of life, patient preferences regarding ICD implantation, and the shared decision-making process.⁴

In order to reduce the waste of resources, it is crucial to clearly identify and prioritize research needs⁵ using qualitative and quantitative research methods to cover both the depth and breadth of these gaps. The research priorities identified by Al-Khatib and colleagues⁴ could contribute to reducing some of the concerns in SCD prevention, but also to creating focused funding opportunities.

Conflicts of interest: The authors have no relevant conflicts to declare in relation to this paper.

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