Preventing sudden death in hypertrophic cardiomyopathy—new backing for ESC guidelines

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A large study conducted across North America, Europe, the Middle East and Asia has validated the ESC recommendations for predicting and preventing sudden cardiac death (SCD) in patients with hypertrophic cardiomyopathy (HCM).

The HCM-EVIDENCE study, presented at ESC Congress 2017, tested the ESC's recommendations in a diverse cohort of patients, said study investigator Constantinos O'Mahony, MRCP(UK).

"Since 2014, the ESC has recommended using a special risk prediction tool called the HCM Risk-SCD to identify which patients are at highest risk for sudden death and would benefit most from having a prophylactic implantable cardioverter defibrillator," explained Dr O'Mahony, from St. Bartholomew's Centre for Inherited Cardiovascular Disease, St Bartholomew's Hospital, and the University College London Centre for Heart Muscle Disease, Institute of Cardiovascular Science, London.

"But, whenever a risk model is created, there are concerns about how generalisable it is outside the original study population. Since we developed the HCM Risk-SCD tool using patients treated exclusively in Europe, it was important for us to demonstrate its applicability in other healthcare systems with different medical expertise and potentially different patterns of disease."
ESC guidelines recommend using the HCM Risk–SCD risk calculator to estimate a patient's 5-year risk of SCD, with the recommendation that high-risk patients receive implantable cardioverter defibrillators (ICD) to prevent fatal ventricular arrhythmias.

For the current study, investigators retrospectively evaluated 3,703 patients to see if their HCM Risk–SCD score accurately predicted whether they eventually went on to suffer SCD.

Overall, the analysis showed that the tool could distinguish well between high- and low- risk patients, with good agreement between what it predicted and their actual 5-year SCD rates.

Specifically, patients classified as low risk (predicted to have a SCD incidence of