

ICDs can reduce sudden death in young patients with hypertrophic cardiomyopathy

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A multicenter registry has demonstrated that the use of implantable cardioverter-defibrillators (ICDs) to combat sudden cardiac death in high-risk pediatric patients suffering from hypertrophic cardiomyopathy (HCM). The study is being presented Nov. 5 at the 2012 Scientific Sessions of the American Heart Association (AHA) in Los Angeles.

While the study found that the rate of possible device complications adds a level of complexity to this age group, it also demonstrated that life-saving ICD interventions were common in younger patients when terminating [irregular heart rhythms](#), called ventricular tachyarrhythmias or fibrillation.

"While HCM is the most common cause of sudden death in the young, existing research has shown that the use of ICDs in adult patients with HCM have been very effective," said the study's lead author Barry J. Maron, MD, director of the Hypertrophic Cardiomyopathy Center at the Minneapolis Heart Institute Foundation in Minneapolis. "This registry is continuing to reveal important implications for younger patients suffering from this disease ."

For the study, the researchers evaluated an international registry of ICDs, implanted from 1987 to 2011, and found 224 patients with HCM judged at high risk for sudden death who received ICDs. They found that 188 patients received ICDs for primary prevention and 36 for [secondary prevention](#) after undergoing evaluation at 22 referral and non-referral institutions in U.S., Europe and Australia.

ICDs terminated ventricular tachycardia/fibrillation in 19 percent of patients over 4.3 years, according to the study authors. Also, primary prevention discharge rate terminating ventricular tachycardia/fibrillation was the same in patients implanted for one, two, three or more risk factors.

Extreme LV hypertrophy was most frequently associated with appropriate interventions in patients experiencing primary [prevention interventions](#) (65 percent). Also, ICD-related complications, particularly inappropriate shocks and lead malfunction, occurred in 41 percent of the patients at 17 years.

ICDs are a potential life-saving device in children with HCM, the most common cause of sudden death in the young.

Provided by Minneapolis Heart Institute Foundation

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