

## Negative prediction for sudden cardiac death high with ECG

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(HealthDay) -- Electrocardiogram (ECG), with or without echocardiogram (ECHO), may have potential value as a mass screening tool to identify the most common causes of pediatric sudden cardiac death (SCD), according to a meta-analysis published online March 5 in *Pediatrics*.

Angie Mae Rodday, of Tufts Medical Center in Boston, and colleagues conducted a meta-analysis using data from 30 studies to evaluate the phenotypic prevalence of selected pediatric disorders associated with SCD, as identified using ECG with or without ECHO techniques. They also sought to evaluate the sensitivity, specificity, and predictive value of ECG when used alone or in combination with ECHO. Included in this review were the three most common pediatric disorders associated with



SCD that can be identified using ECG techniques: hypertrophic cardiomyopathy (HCM), <u>long QT syndrome</u> (LQTS), and Wolff-Parkinson-White syndrome.

The researchers found that the summary phenotypic prevalence of HCM was 45 per 100,000 asymptomatic children; the summary phenotypic prevalences for LQTS and Wolff-Parkinson-White syndrome were seven and 136 per 100,000, respectively. For HCM and LQTS, the area under the receiver operating characteristic curve for ECG was 0.91 and 0.92, respectively. There was a high negative predictive value for detection of HCM or LQTS using ECG, whereas the positive predictive value varied and was dependent on the cut-points used and the true prevalence of each condition.

"Results provide an evidence base for evaluating pediatric screening for these disorders. ECG, alone or with ECHO, was a sensitive test for mass screening and negative predictive value was high, but positive predictive value and false-positive rates varied," the authors write.

One of the authors disclosed <u>financial ties</u> to the medical technology industry.

## More information: <u>Abstract</u>

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