

New Risk Assessment Score to Predict Sudden Cardiac Arrest



A new risk assessment tool has been developed by a Cedars-Sinai Heart Institute investigator and his team. The tool can help physicians better predict who is most likely to suffer a cardiac arrest. The findings are published in the European Heart Journal.

Sudden cardiac arrest is fatal in over 90% of patients. However, it can be prevented if patients at high-risk could be identified before the event occurs. Currently, risk of sudden cardiac arrest is assessed based on measurements of the left ventricular ejection fraction (LVEF). Those with LVEF value below 35% are considered to be at high risk. But this method is not completely effective and does not help those who are over 35%. EKG-based scores on the other hand work for patients with all levels of LVEF measurement and may be more effective.

Senior author, Sumeet Chugh, MD, director of the Heart Rhythm Center at the Cedars-Sinai Heart Institute in Los Angeles explains that predicting patients who are most vulnerable is most crucial. By using his new risk score, it may be possible to do so. It also doesn't hurt that the tool is broadly accessible and uses very inexpensive technology.

The risk score is based on readings from a 12-lead electrocardiogram (EKG) test. Multiple data points are used including the patient's heart rate, left ventricular hypertrophy, and four specific measures of how the heart muscle undergoes electrical stimulation and relaxation. Scores range from zero to 6. Those with a score 4 or over have nearly 20 times the increased risk of sudden cardiac arrest. They can be preemptively treated with medication and a defibrillator.

The study included 522 patients who suffered cardiac arrest and who had archived 12-lead EKG readings available before and unrelated to the event. This data was compared with 736 geographical control patients. The objective was to determine the effectiveness of the new score. It was validated in the Atherosclerosis Risk in Communities Study and is now ready for further clinical evaluation.

"This new risk score has the potential to provide clinicians with a user-friendly, inexpensive, data-driven tool for determining which of their patients could benefit from interventions to prevent sudden cardiac arrest," Chugh said.

Source: [Cedars-Sinai Medical Center](#)

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