

Sudden cardiac arrest may follow missed warning signs

BY LISA RAPAPORT

Reuters Health) - Many patients who have a sudden cardiac arrest may have missed warnings signs like chest pain and shortness of breath that, if caught earlier, could improve their survival odds, a U.S. study suggests.

Sudden cardiac arrest happens when the heart abruptly stops beating, depriving the brain and vital organs of blood, oxygen and nutrients. It can be fatal if it's not treated within minutes.

Roughly half the time, however, patients may experience warning signs in the four weeks before their heart stops – and for nearly all who do, those symptoms tend to recur in the 24 hours before their heart stops, researchers report in the *Annals of Internal Medicine*.

“In the past, we have believed that sudden cardiac arrest is an unexpected event with very little warning and almost no time to intervene,” said senior study author Dr. Sumeet Chugh, associate director of the Cedars-Sinai Heart Institute in Los Angeles.

“This opens a new window of opportunity for prediction and prevention of sudden cardiac arrest, and for many patients we may have more time to intervene than we realized,” Chugh said by email.

The trouble is only about one in five people who have warning symptoms call for help, the study found.

When they did call 911, survival odds shot up to 32 percent, compared with just 6 percent for people who had symptoms and didn't seek emergency medical attention.

One of the biggest challenges in assessing symptoms that precede sudden cardiac arrest is that many patients die before they ever reach the hospital.

For the current study, Chugh and colleagues examined data collected on 839 patients who had sudden cardiac arrests in the Portland area, with details on symptom history taken from not just doctors at the hospital, but also emergency medical workers, family members and other witnesses at the scene.

On average, the patients were around 53 years old, and the majority were men.

Among 430 patients with warning symptoms before their heart stopped, 54 percent of men and 24 percent of women had chest pain, the study found.

For women, however, shortness of breath was more common, occurring in 31 percent of those with warning symptoms compared with 14 percent of the men.

Older patients and people with a history of heart disease were more likely to call 911, the study found.

After adjusting for differences in patients and resuscitation efforts, a 911 call was linked to more than four times greater survival odds for people who had warning symptoms.

One shortcoming of the study is that the analysis excluded about 24 percent of potential patients because of a lack of data on symptoms, the authors note. Also, because all people in the study did have sudden cardiac arrest, the findings don't account for individuals who may have successfully gotten treated for symptoms and avoided that outcome.

Still, the findings fit with what doctors already know about the way these episodes can develop, said Dr. Jeremy Ruskin, a researcher at Harvard Medical School and director of the cardiac arrhythmia service at Massachusetts General Hospital in Boston.

“Symptoms of chest pain and shortness of breath commonly reflect reduced blood flow to the heart which is also the mechanism that is ultimately responsible for the abnormal

heart rhythms that cause cardiac arrest,” Ruskin, who wasn’t involved in the study, said by email.

While perhaps not surprising, the findings still highlight the need for doctors to do a better job of educating patients, going beyond the classic description of chest pain or radiating pain in the left arm to include conditions like unexplained shortness of breath, persistent nausea, profound fatigue and light headedness, noted Dr. Venu Menon, a director of the cardiac intensive care unit at Cleveland Clinic in Ohio.

“While these symptoms lack specificity they will empower more people to alert EMS,” Menon, who wasn’t involved in the study, said by email. “On the flip side, a large proportion of worried well may also clog up limited EMS services if an alarmist approach is taken.”

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