

Heart ultrasound helps determine risk of heart attack, death in HIV patients

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An ultrasound test can tell if people with the human immunodeficiency virus (HIV) and heart disease are at risk of heart attack or death, according to new research reported in *Circulation: Cardiovascular Imaging*, an American Heart Association journal.

Stress echocardiography, better known as a "stress echo," is an ultrasound of the heart during rest and stress that determines risk of heart attack and death in patients with known or suspected blockages in the blood vessels supplying the heart.

People with HIV are at increased risk for accelerated [blockages](#) and subsequent heart attack or death.

"We looked at whether stress echo can help predict risk in a high-risk group, HIV patients with known or suspected heart disease and determine whether they have a high or low risk of heart attack and death in the future," said Farooq A.

Chaudhry, M.D., senior author of the study and associate professor of medicine at Columbia University College of Physicians and Surgeons in New York City.

Chaudhry and colleagues performed a stress echo and analyzed follow-up data on 311 HIV patients (average age 52 years and 74 percent male) with suspected or known heart disease.

Among the patients studied, 26 percent had an abnormal stress echo. During the average 2.9-year follow-up, 17 nonfatal heart attacks and 14 [cardiac deaths](#) occurred.

The prognosis was good for HIV patients who had normal stress echo findings, researchers said. These patients' average risk for heart attack or death was less than 1 percent per year - the same as that of the general, healthy population.

The risk of heart attack and death rose significantly for HIV patients with abnormal stress echo findings.

Their average risk was nearly 12 percent per year - 10 times higher than that of the normal population and more than three times that of people without HIV who have an abnormal stress echo.

The cumulative survival for HIV patients with normal stress echo results was 100 percent at one year and 98 percent at four years, which is in stark comparison to 92 percent at one year and 62 percent at four years in those patients with an abnormal stress echo.

"Although we did not study which treatments are most effective for these patients, [HIV patients](#) who have abnormal stress echocardiography should probably be monitored and treated more aggressively to prevent [heart attack](#) and death," said Chaudhry, who is also associate chief of cardiology and director of echocardiography at St. Luke's Roosevelt Hospital Center in New York City. "Conversely, patients with a normal stress echo might not need such aggressive interventions."

Provided by American Heart Association

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