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## Causes of sudden cardiac death in women



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Sudden cardiac death (SCD) remains a major cause of death around the world, notwithstanding recent advancements in prevention and intervention of cardiac diseases. Among women, the incidence of SCD is significant, but lower than in men, particularly in the premenopausal and early postmenopausal years.

A new study examining the autopsy findings and causes of death among women in a large SCD population revealed women were considerably older at the time of SCD and more commonly had nonischaemic causes. The study findings are published in the journal *Circulation*.

The mechanisms and risk markers of SCD are not as well defined for women, possibly due to the difference in population burden. To address this knowledge gap, the current study also sought to classify prior electrocardiogram (ECG) characteristics in male and female subjects with SCD. The study reviewed and analysed data from the Finnish genetic study of arrhythmic events (FinGesture).

The FinGesture study has systematically collected clinical and autopsy data from subjects with SCD in Northern Finland between 1998 and 2017. The cohort consists of 5,869 subjects with SCD. Previously recorded ECGs were available and analysed in 1,101 subjects (18.8% of total population; and in 25.3% of women).

Analyses of FinGesture data revealed the following:

- Female subjects with SCD were significantly older than men:  $70.1 \pm 13.1$  years versus  $63.5 \pm 11.8$  years (mean  $\pm$  standard deviation,  $P < 0.001$ ).
- The most frequently identified cause of death was ischaemic heart disease in both sexes: 71.7% among women versus 75.7% among men,  $P = 0.005$ .
- Women were more likely to have nonischaemic cause of SCD than men (28.3% versus 24.3%,  $P = 0.005$ ).
- The prevalence of primary myocardial fibrosis was higher among women (5.2%,  $n = 64$ ) than in men (2.6%,  $n = 120$ ;  $P < 0.001$ ).

In addition, this review found that female subjects with SCD were more likely to have a prior normal ECG than men. A normal ECG was even more common among nonischaemic female subjects with SCD (27.8% versus 16.2% in men,  $P = 0.009$ ). However, ECG markers of left ventricular hypertrophy, with or without repolarisation abnormalities, were more commonly observed in women (8.2%; 17.9%) than in men (4.9%; 10.6%,  $P = 0.036$ ;  $P < 0.001$ , respectively).

Source: [Circulation](#)

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Published on : Wed, 27 Feb 2019