

Sudden cardiac death more common than thought among the young

September 10, 2007 | [Lisa Nainggolan](#)



Vienna, Austria - A 30-year nationwide study in Iceland has shown that sudden cardiovascular death among the young is more common than previously thought. **Dr Gunnar Thor Gunnarsson** (FSA Regional Hospital, Akureyri, Iceland) reported the study findings at the **European Society of Cardiology Congress 2007** last week.



Gunnarsson and colleagues found that sudden cardiac death is responsible for 7.5% of all nonaccidental, nonviolent deaths in Iceland in the 12- to 35-year age group. "We tried to estimate the scope of this problem," he told **heartwire**. "It's not as rare as one would think.

"The sad thing about sudden cardiac death is that it's devastating for friends and family," says Gunnarsson, who speaks from personal experience, having lost his 10-year-old daughter to hypertrophic cardiomyopathy six years ago. "The nature of it is that it starts as nothing and then [death] strikes as the first and only symptom of underlying heart disease." He says he would like to see nationwide ECG screening programs, such as the one being run in Italy in young athletes, set up in Iceland and other countries.

Sudden cardiac death more common in males than females

Gunnarsson and colleagues conducted a retrospective study of the entire population of Iceland from 1974 to 2004 and obtained death certificates for all individuals between the ages of 12 and 35 who died. A total of 45 people fulfilled the criteria for sudden cardiac death, with an overall incidence of 1.47/100 000 per year.

Sudden cardiac death in the young is not as rare as one would think.

The incidence differed somewhat in males and females, with respective incidences of 1.86/100 000 and 1.07/100 000. Gunnarsson says it's not clear at this point why sudden cardiac death seems to occur more frequently in boys and men than in girls and women. "We don't know [why it's higher among males than females], but this is what others have seen." He said this could perhaps be explained by the age at which ischemic heart disease (IHD) first manifests itself, but in fact in this study they found a similar incidence of IHD among males and females.

The most common diagnoses after autopsy were premature IHD (24% of cases, all of which occurred in individuals over the age of 25), structurally normal heart (16%), hypertrophic cardiomyopathy (13%), arrhythmia-related death (13%), myocarditis (9%), pulmonary embolism (7%), long-QT syndrome (4%), dilated cardiomyopathy (4%), and coronary anomaly (2%).

For those who had a structurally normal heart, the cause of death remains uncertain, Gunnarsson said. However, arrhythmic death due to ion-channel diseases or subclinical myocardial disease is a possibility, he noted.

Incidence higher than that recorded in Sweden

This is only the second time that sudden cardiac death in an entire nation has been studied, Gunnarsson says, and these new findings from Iceland show a somewhat higher incidence of sudden cardiac death in the young than that reported previously in Sweden [1], which was 0.93 per 100 000 per year in individuals aged 15 to 35.


"We believe we have fairly accurate data—a small country with few people and few cases," Gunnarsson commented to **heartwire**. "Sudden cardiac death in the young was thought to be fairly rare. We have found that it is certainly a true clinical entity."

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He added that there is debate about how far down screening should go in terms of age. "I personally lost my daughter at age 10 to one of these diseases, so it's a question of how far down we go." Screening in Italy—the only country in the world to use ECG screening—begins at 12 and "appears to be successful; they have got the numbers [of deaths] down," he says.

Gunnarsson and colleagues will now use their data to try to determine the symptoms and circumstances preceding sudden cardiac death in the young, and they will also look at risk factors and family history, he said.

Source

1. Wisten A, Forsberg H, Krantz P, Messner T. Sudden cardiac death in 15-35-year olds in Sweden during 1992-99. *J Intern Med* 2002; 252:529-536. 

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