Commonly used heart drug associated with increased risk of sudden cardiac arrest

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A drug commonly used to treat high blood pressure and angina (chest pain) is associated with an increased risk of out-of-hospital sudden cardiac arrest, according to results from the European Sudden Cardiac Arrest network (ESCAPE-NET) presented today at EHRA 2019.

Sudden cardiac arrest causes around half of cardiac deaths in Europe and one in five natural deaths. The heart stops pumping after a cardiac arrhythmia (ventricular fibrillation/tachycardia); this is lethal in minutes if untreated. ESCAPE-NET was set up to find the causes of these arrhythmias, so they can be prevented.

Dr. Hanno Tan, ESCAPE-NET project leader and cardiologist, Academic Medical Centre, Amsterdam, the Netherlands, urged caution when interpreting these results. He said: "The findings need to be replicated in other studies before action should be taken by doctors or patients."

The study examined if nifedipine and amlodipine, dihydropyridines widely used for high blood pressure and angina, are linked with out-of-hospital cardiac arrest. The nifedipine doses most often used and studied in this investigation are 30 mg and 60 mg (90 mg is available but infrequently used) and the amlodipine doses are 5 mg and 10 mg. Standard practice is to start with a lower dose, then give the higher dose if blood pressure or chest pain are not sufficiently reduced.

The analysis was done using data from the Dutch Amsterdam

Resuscitation Studies registry (ARREST, 2005-2011) and confirmed in the Danish Cardiac Arrest Registry (DANCAR, 2001-2014), both part of ESCAPE-NET. Patients with out-of-hospital cardiac arrest due to ventricular fibrillation/tachycardia were enrolled, plus up to five controls per patient matched for age and sex. Controls were from the Dutch PHARMO Database Network and the general population in Denmark. In total, the study included 2,503 patients and 10,543 controls in the ARREST analysis and 8,101 patients and 40,505 controls in the DANCAR analysis.

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