

Chest pain and prior heart attack are dangerous markers in stable coronary artery disease

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Angina in patients with a previous heart attack is linked with a poor outcome in patients with stable coronary artery disease, according to late

breaking results from the CLARIFY study presented in a Hot Line Session today at ESC Congress 2019 together with the World Congress of Cardiology and published in the *European Heart Journal*.

The five-year results of this large registry also found that although the use of evidence-based prevention medications was good, less than 10 percent of patients achieved the most recent recommended targets for blood pressure and cholesterol control.

"We estimate that in Europe, around 22 million people have stable coronary artery disease," said first author Dr. Emmanuel Sorbets of Hospital Avicenne of Bobigny, France. "The clinical profile and management of these patients has changed over the last 25 years and there is little information about prognosis."

CLARIFY was an observational and longitudinal study performed at 394 centres in 45 countries across five continents. (3,4) In 2009 to 2010, a total of 32,703 patients with stable coronary artery disease were enrolled. Stable coronary artery disease was defined as having at least one of the following: previous [myocardial infarction](#) or revascularisation more than three months ago, proven symptomatic myocardial ischaemia, and angiographic coronary stenosis greater than 50 percent. Patients were followed-up once a year for five years.

The five-year rate of the composite primary outcome of cardiovascular death or myocardial infarction was 8.0 percent. Event rates ranged from 5.5 percent in Asia to 10.6 percent in Central/South America.

In patients who had experienced a previous heart attack, those with angina had a significantly greater likelihood of the primary outcome (11.8 percent) compared to those without angina (8.2 percent). But in patients without a previous heart attack, event rates were lower and similar regardless of the presence of angina (6.3 percent with angina

versus 6.4 percent without).

Dr. Sorbets said: "CLARIFY confirms that patients with prior myocardial infarction are at higher risk than those without. There has always been uncertainty about the effect of angina on cardiovascular outcomes. We show for the first time that angina worsens prognosis only in patients with a previous myocardial infarction. This is an easily identifiable high-risk subset that should be targeted for more intensive preventive treatment."

Most patients received prevention therapies regardless of their clinical profile and the geographical area in which they lived. However, few met the most recent recommended blood pressure and [low-density lipoprotein](#) (LDL) cholesterol targets. Less than one-third (29.0 percent) had blood pressure less than 130/80 mmHg, while just 20.9 percent had LDL 1.8 mmol/L (70 mg/dl) or lower. Only 7.4 percent achieved both goals.

"A potential explanation for the mismatch between treatment and attaining targets is that full doses may not be prescribed," said Dr. Sorbets. "A previous analysis of CLARIFY showed that just 13.3 percent of patients received the full dose of beta-blockers. We did not collect dose information on the other therapies. Another likely possibility is that patients did not take their pills."

The main independent predictors of the primary outcome were history of hospitalisation for heart failure (hazard ratio [HR] 2.13), current smoking (HR 1.77), atrial fibrillation (HR 1.61), living in Central/South America (HR 1.60), prior stroke (HR 1.51), prior myocardial infarction (HR 1.50), diabetes (HR 1.40), peripheral artery disease (HR 1.31), former smoking (HR 1.31), and current angina (HR 1.30).

Some 12.5 percent of patients were current smokers. "The rate of

smoking was relatively low, given that an earlier analysis found that 46.5 percent of participants were former smokers," said Dr. Sorbets.

"Nevertheless, smoking is related to worse outcomes, so we need to keep encouraging patients to quit."

Regarding what can be done to help stable coronary artery disease patients meet [blood pressure](#) and cholesterol targets, Dr. Sorbets said: "Doctors should prescribe full doses of preventive medications, particularly in those with [angina](#) and prior myocardial infarction, who have the worst prognosis. This group will benefit from careful management of their risk factors. We also need better ways to help patients consistently take their medications and to assess their adherence."

More information: Emmanuel Sorbets et al. Rationale, design, and baseline characteristics of the CLARIFY registry of outpatients with stable coronary artery disease, *Clinical Cardiology* (2017). [DOI: 10.1002/clc.22730](#)

Emmanuel Sorbets et al. β -blockers, calcium antagonists, and mortality in stable coronary artery disease: an international cohort study, *European Heart Journal* (2018). [DOI: 10.1093/eurheartj/ehy811](#)

CLARIFY: Prospective observational Longitudinal Registry of patients with stable coronary artery disease. Full paper will be available during congress from press@escardio.org.

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