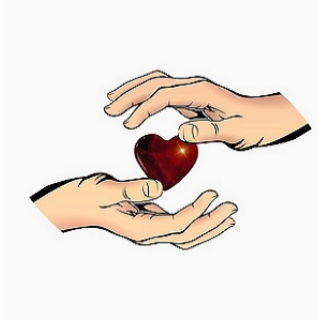## Study: Secondary Prevention of Acute Myocardial Infarction 'Suboptimal'

Secondary prevention after acute myocardial infarction (AMI) aims to reduce recurrence, decrease morbidity and mortality, and improve quality of life. However, results of a new cohort study in Sweden indicate "the failure" of secondary prevention in daily clinical practice and high rate of non-fatal adverse cardiovascular events two years after AMI. The findings by a team of researchers from University of Gothenburg are published in the peer-reviewed journal *BMC Cardiovascular Disorders.*

See Also: High-Performance Hospitals Keep AMI Patients Alive in the Long Term

Current guidelines for cardiovascular prevention worldwide recommend lifestyle interventions: smoking cessation, increased physical activity, maintaining a healthy body mass index (BMI), optimal control of risk factors (blood pressure, cholesterol and glucose control) and optimal use of cardio protective drug therapies – i.e., aspirin, beta-blockers, angiotensin-converting enzyme (ACE) inhibitors/angiotensin II receptor blockers (ARBs), and lipid-lowering drugs.

For the new study, the authors defined guideline-directed secondary preventive goals as optimally controlled blood pressure, serum cholesterol, glucose, regular physical activity, smoking cessation and pharmacological treatment.

The mean age of the study cohort (n = 200) at the index AMI was 63.0±9.7 years, 79 percent were men. Based on the results, the six secondary preventive goals were achieved by only 3.5 percent of the patients two years after the AMI event. LDL<1.8 mmol/L was achieved in 18.5 percent of the cohort, regular exercise in 45.5 percent and systolic blood pressure <140 mmHg in 57 percent.

Notably, adherence to cardio-protective medications was generally good: anti-platelet therapy was used by 97 percent of the patients, beta-blockers by 83 percent, angiotensin-converting enzyme inhibitors/angiotensin receptor blockers by 76.5 percent and statins by 88.5 percent. Still, non-fatal cardiovascular events occurred in 46.5 percent of the cohort and cardiac readmissions in 30 percent at the two-year follow-up.

The study, however, was not designed to investigate cause-effect relationship between cardiovascular events and secondary prevention.

"It is noteworthy to mention that the number of cardiac events may outnumber readmission rate since several events may occur during the same readmission," the authors write. "Our study was not powered to assess the causal relation between increased non-fatal cardiovascular events and suboptimal secondary prevention."

The study confirmed some observations from previous short-term studies. For instance, regular physical activity is a secondary preventive goal that may be hard to achieve.

As regards smoking cessation, the results show an improvement in the number of patients who quit smoking from the index AMI: 87.5 percent of the study participants were classified as non-smokers two years after AMI. "However, it is not clear whether the improved smoking cessation rate observed in our cohort could be attributed to an increase in the death rate in those patients that did continue smoking but did not survive long enough to be invited," the authors point out.

Source: BMC Cardiovascular Disorders
Image Credit: Pixabay

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