

Diabetic stroke risk after AMI drops in 10 year period

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The risk of ischemic stroke after acute myocardial infarction in diabetics has dropped over a 10 year period, according to a study of more than 173,000 AMI patients in the Swedish RIKS-HIA register.

The findings were presented at the ESC Congress today by Ms Stina Jakobsson from Sweden. They reveal that reperfusion therapy and secondary prevention drugs produced the decline and brought [stroke risk](#) after AMI closer to that of non-diabetics.

Ms Jakobsson said: "Ischemic stroke following an [acute myocardial infarction](#) is a fairly uncommon but devastating event with high mortality. It has long been recognized that patients with [diabetes mellitus](#) are at a particularly [high risk](#) of complications after an AMI but until now, the risk of ischemic stroke after an AMI in patients with diabetes has been uncertain."

The study included 173,233 patients registered as having their first AMI during 1998-2008 in the Swedish Register of Information and Knowledge about Swedish Heart Intensive Care Admissions (RIKS-HIA). RIKS-HIA contains data on all patients admitted to Sweden's 74 coronary care units.

During 1998-2008, of the 33,503 (19%) patients in the register who had a previous diagnosis of diabetes, 5.5% had an ischemic stroke within one year after the AMI. This compared to a stroke rate of 3.5% in patients on the register who did not have diabetes and 0.3% in the Swedish

general population (who were not on the register and had no history of AMI). Ms Jakobsson said: "We believe that an important mechanism behind the increased risk for ischemic stroke after an AMI, especially in diabetic patients, may be increased inflammation and platelet [reactivity](#) seen with an AMI."

Ischemic stroke rate decreased over time (see figure 1). During 1998-2000, 7.1% of diabetic patients had an ischemic stroke within one year after their first AMI, compared to 4.7% during 2007-2008. A smaller decline was observed in non-diabetic patients, from 4.2% in 1998-2000 to 3.7% in 2007-2008.

In the diabetics, prior reperfusion therapy with coronary angioplasty, coronary angioplasty during the AMI hospital stay, and prescription of the secondary preventive medications acetylsalicylic acid, P2Y12-inhibitors and statins when leaving hospital were independently associated with the reduced stroke risk over time.

Higher age, prior ischemic stroke, a specific type of [myocardial infarction](#) (ST-elevation MI) and atrial fibrillation during the hospitalization were found to be risk factors for an ischemic stroke within one year after AMI in patients with diabetes.

The study found that despite the greater improvements in stroke risk seen in diabetic patients, they were treated to a lesser extent than non-diabetic patients with reperfusion therapies during their initial hospital stay. They also left hospital with less standard medication for [secondary prevention](#) after an AMI. During the entire study period, the prescription of secondary preventive medication increased in both diabetic and non-diabetic patients.

Ms Jakobsson said: "The decreased [ischemic stroke](#) rate in both patient groups over time may be explained by a reduction in established risk

factors for stroke and increased use of secondary preventive treatments after AMI. The larger reduction in stroke risk seen in diabetic patients may indicate that they gained more from the greater use of secondary preventive medication. But secondary preventive treatments are still underutilized in [diabetic patients](#) and there is room for increased use."

Provided by European Society of Cardiology

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