

Heart failure and stroke identified as lethal combination

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Human heart. Credit: copyright American Heart Association

Heart failure and stroke has been identified as a lethal combination in research presented today at EuroHeartCare 2017. Heart failure patients with previous stroke had greater risks of depression, hospitalisation and death than those without a history of stroke.

"Stroke is a common comorbidity in patients with [heart failure](#), yet little is known about the characteristics and outcomes of this patient population," said Dr Chantal Ski, associate professor, Melbourne University, Australia. "Both are complex and debilitating diseases so it seems likely that patients experiencing both will do worse but there is no evidence base to help guide clinical practice."

This study was conducted to identify differences in the psychosocial and behavioural characteristics and outcomes between heart failure patients with and without comorbid stroke. The study was a secondary analysis of the Coordinating study evaluating Outcomes of Advising and Counselling in Heart failure (COACH) study, a randomised controlled trial conducted at 17 centres in the Netherlands.

The study included 1 023 patients aged over 18 years who were hospitalised for heart failure. Of these, 105 had a previous stroke and 918 did not. To be eligible for the study, patients had to be well enough to travel to hospital and be interviewed.

Data on [cardiovascular risk factors](#), comorbidities, and disease severity was collected through interviews, questionnaires, and clinical assessment at six, 12, and 18 months. Patients were followed up for three years. The researchers compared the risks of hospitalisation and mortality between heart failure patients with and without a history of stroke.

At the start of the study patients in the two groups were similar except that those with heart failure and stroke had more comorbidities than those with heart failure alone. Heart failure patients with a history of stroke fared significantly worse than those with heart failure alone across all outcomes and all time points.

Patients with both conditions died an average of five months earlier than those with heart failure alone.

At 18 months, patients with heart failure and a history of stroke had a 1.5 to 2 times greater odds of hospitalisation or death than those with heart failure alone. After adjusting for baseline age, sex, heart failure severity (New York Heart Association [NYHA] classification I to IV), type 2 diabetes, transient ischaemic attack, and [peripheral arterial disease](#), those with heart failure and stroke were still 59% more likely to be rehospitalised or die compared to the other group.

At three years, heart failure patients with stroke had an up to 56% greater chance of all-cause death than those with heart failure alone, after adjusting for age, sex, and NYHA classification.

Compared to those without a history of stroke, heart failure patients with previous stroke experienced cardiovascular rehospitalisation 84 days earlier, all-cause hospitalisation 78 days earlier, and heart failure rehospitalisation two months earlier. One year after discharge from hospital, patients with both conditions were twice as likely to be depressed as those with heart failure alone.

Dr Ski said: "Our study shows that having both heart failure and stroke places patients at twice the risk than if they only had one of the diseases. These patients had to be able to travel to hospital to participate in the research which means that they had recovered from their stroke or only had mild disabilities. Those with severe stroke might have even worse outcomes."

"The increased risks we observed in patients with both conditions could be because they did not receive optimal management or education on how to self manage both conditions simultaneously," she added. "In addition, we know that exercise can reduce the risk of further events in [patients](#) with heart failure or stroke but having both conditions incapacitates a significant proportion of this population."

Dr Ski concluded: "Currently heart failure is managed by one team and stroke by another. Patients with both [heart failure](#) and stroke need an interdisciplinary and integrated approach to their care in hospital and at home. Heart failure and [stroke](#) teams should work together to rationalise medications, ramp up lifestyle and behavioural changes, and include carers and family in any interventions."

More information: Dr Ski will present the abstract 'Heart failure in patients with stroke - new approaches needed' during Moderated poster session 3 – Heart failure which takes place on 20 May from 10:00 to 11:00 in the Moderated Poster Area.

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