

EPIDEMIOLOGY OF HEART FAILURE AND FEASIBILITY OF HOME CARE IN PATIENTS WITH WORSENING CHRONIC HEART FAILURE

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Abstract:

Aim: To investigate gender-specific trends in long-term mortality in patients hospitalised for ischaemic and non-ischaemic heart failure (HF) and explore temporal trends in the risk of HF complicating acute myocardial infarction (AMI). Another aim is to characterise patients with chronic heart failure (CHF) that seek an emergency department (ED) because of their deteriorating condition and evaluate the feasibility of home care (HC) in comparison with conventional care (CC) in patients with worsening CHF.

Patients and methods: In Papers I and II, data from the national hospital discharge and cause-specific death registers were linked through the personal identity number. The hospital discharge register has been in operation since the 1960s and has operated on a nationwide basis since 1987. Between April 2004 and May 2006, patients seeking care for dyspnoea were identified at the ED at Sahlgrenska University Hospital/Östra, Göteborg, Sweden. From this population, patients with known CHF were registered and further investigated on gender, age, socio-economic status, heart rate, blood pressure and symptoms and signs of HF. The information was saved in a registry. These data were subsequently used in Papers III and IV.

Results: Long-term mortality decreased, mainly during 1987–1995, with no further decrease after 2001. Survival improved more in men than in women, particularly in patients aged <65 years, and more in patients with ischaemic HF as compared in patients with non-ischaemic HF. The incidence of risk for HF decreased within three years after admission for AMI. In multivariate analyses risk of HF decreased by 4% yearly. Having had a stroke before admission increased the risk of HF by 37%, diabetes increased the risk by 76% and atrial fibrillation (AF) by 80%. Patients with any kind of valvular disease had a more than doubled risk. Of patients with worsening CHF that sought the ED, only 2% could be sent home directly. The remaining patients were admitted to hospital because of serious conditions, including pneumonia/respiratory disease, myocardial infarction, pulmonary oedema, anaemia, need to monitor cardiac rhythm, pathological blood chemistry and difficulties to communicate. There were no significant differences in clinical events, adverse events or in health-related quality of life (HRQL) between the HC and CC groups. The total cost related to CHF was lower in the HC group after 12 months.

Conclusion: Although long-term mortality after a first hospitalisation for HF has decreased dramatically in Sweden during the past two decades, mortality still remains high in this country. Our findings indicate a need for new strategies in the treatment of HF, potentially more so in patients with preserved left ventricular systolic function, a group representing almost 50% of the HF population, with larger proportions of women and older patients. The decrease in risk of developing HF after AMI found between 1993 to 2004 mirrors the more effective medical and interventional treatments that have been developed to limit the infarct size. However, if patients already suffer from the disease, the vast majority of those with worsening symptoms seeking emergency care require hospital admission, where rapid stabilisation and treatment of co-morbidities should be prioritised. Furthermore, it may be possible that a specialist nurse could care for selected patients with worsening CHF in a home setting, even when the patients were assessed as being in need of hospital care.

Key words: Chronic heart failure, mortality, deterioration, hospitalisation, gender, home care, quality-adjusted life years, emergency care, health care costs, ischaemic, non-ischaemic, health-related quality of life, conventional care, acute myocardial infarction, coronary heart disease, heart failure

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This thesis is based on the following papers:

- I Shafazand M, Schaufelberger M, Lappas G, Swedberg K, Rosengren A.
Survival trends in men and women with heart failure of ischaemic and non-ischaemic origin: data for the period 1987-2003 from the Swedish Hospital Discharge Registry.
European Heart Journal 2009;30:671-678.
- II Shafazand M, Rosengren A, Lappas G, Swedberg K, Schaufelberger M.
Decreasing trends in the incidence of heart failure after acute myocardial infarction from 1993-2004. A study of 175,216 patients with a first AMI in Sweden.
Submitted.
- III Shafazand M, Patel H, Ekman I, Swedberg K, Schaufelberger M.
Why do patients with worsening chronic heart failure require hospital care?
Submitted.
- IV Patel H, Shafazand M, Ekman I, Höjgård S, Swedberg K, Schaufelberger M.
Home care as an option in worsening chronic heart failure - A pilot study to evaluate feasibility, quality adjusted life years and cost-effectiveness.
European Journal of Heart Failure 2008;10:675-681.

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