

# Sex-related differences in mortality among patients with incident heart failure. The Danish National Indicator Project

## Purpose

To examine sex-related differences in mortality among patients with incident heart failure (IHF)

## Methods

A total of 12.531 consecutive patients with IHF were prospectively registered between 2005-2009 in the Danish National Indicator Project, a nationwide quality improvement initiative with mandatory participation for all danish hospitals. LV ejection fraction (LVEF) was available on 10.749 patients (86 %) and was divided into four categories:  $EF < 25\%$ ,  $25 \leq EF < 35\%$ ,  $35 \leq EF < 40\%$ . One year mortality was assessed by record linkage with the Danish Civil Registration System and compared using multivariate logistic regression controlling for age and comorbidity.

## Abstract Authors

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## Conclusion

Women with IHF appear to have a higher mortality compared with men. The increased mortality may be explained by a higher age at the time of diagnosis and a higher level of comorbidity among female IHF patients. We know that heart failure is a serious disease, and is one of the biggest reasons for acute hospital admission. The incidence for heart failure is still increasing. The patient population in Europe is getting older, and the consequences are, that several patients have survived a heart attack, or had a previous damage to the heart muscle resulting in the symptoms of heart failure. In Denmark we have a population of old age. As our results indicates, women have a higher mortality than men but they also are older of age and have the majority of comorbidity. We will continue to follow the population of incident heart failure patients in Denmark.

## Results

1 year cumulative mortality among women and men were 17 % and 14 % respectively ( $p < 0.0001$ ), corresponding to a crude Odds Ratio (OR) of death among women of 1.27 (95 % confidence Interval (CI): 1.14-1.42). However, after controlling for age and comorbidity the OR dropped to 0.94 (95 % CI: 0.83-1.06).

An increased crude mortality risk among women was also found after stratifying the analyses according to LVEF, i.e. the crude OR ranged from 1.08-1.49. However, like in the overall analyses, the apparent increased mortality risk among women disappeared after controlling for age and comorbidity. In fact the mortality appeared to be reduced among women with  $EF < 25\%$  OR 0.79 (95 % CI 0.64-0.97) while there were no sex-related differences in the other groups:  $25 \leq EF < 35\%$  OR 1.05 (95 % CI: 0.84-1.30);  $35 \leq EF < 40\%$  OR 1.14 (95 % CI 0.84-1.56);  $EF > 40\%$  OR 0.98 (95 % CI 0.74-1.29).

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