Women with diabetes at increased relative risk of heart failure compared to men with diabetes

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Background

- Diabetes growing issue worldwide with increased associated costs for treatment, with the complications of diabetes often more devastating and costly.
- Heart failure is the most common cardiac complication for people with diabetes and can occur independent of commonly known risk factors.
- Sex differences have been observed in the risk of heart failure within people with diabetes in a meta-analysis of 12million people.
- We explore the findings in the UK Biobank population for further clarification on the effect of confounders on the risk of heart failure.

Methods

493, 167 participants aged 40 – 69 recruited included (recruited 2006 – 2010 as part of UK Biobank prospective study)

22, 685 (4.6%) participants had prevalent diabetes (9,339 excluded for incident diabetes)

Mortality
9 year follow up

Heart failure
8 year follow up

Results & Conclusions

A multivariate analysis was performed for outcomes of all cause mortality and heart failure. The analysis stratified for age, ethnicity, hypertension, hypercholesterolaemia, smoking, BMI, alcohol status with coronary artery disease.

Conclusions

- Diabetes increases the risk of heart failure for both women, but the increase in risk is relatively higher for women with diabetes than men.
- This study shows that the excess risk in women persists despite stratification for risk factors including coronary disease, previously unknown.
- Diabetic cardiomyopathy may be a contributor to this excess risk of heart failure and may affect women with diabetes more than men.
- Further research investigating the structural and functional cardiovascular differences in those with diabetes according to sex is underway.