Abstract: P4533

Duration of heart failure and effect of defibrillator implantation in patients with non-ischemic systolic heart failure.

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Topic(s):
Chronic Heart Failure – Epidemiology, Prognosis, Outcome

Citation:

Funding Acknowledgements:
The work was sponsored by The Danish Heart Foundation (Hjerteforeningen) and the Lundbeck Foundation (Lundbeckfonden). The DANISH trial was supported

Introduction: Patients with non-ischemic systolic heart failure have increased risk of sudden cardiac death (SCD) and death from progressive pump failure. Whether the risk of SCD changes over time is unknown. We seek to investigate the relationship between duration of heart failure, mode of death, and effect of implantable cardioverter defibrillator (ICD) implantation.

Methods: We examined the risk of all-cause death and SCD according to the duration of heart failure among patients with non-ischemic systolic heart failure enrolled in the Danish Study to Assess the Efficacy of ICDs in Patients with Non-ischemic Systolic Heart Failure on Mortality (DANISH) trial. Patients were divided according to quartiles of heart failure duration (Q1 = 8 months, Q2 = 9 – 18 months, Q3 = 19 – 65 months, Q4 = 66 months).

Results: A total number of 1116 patients were included. Patients with the longest duration of heart failure were older, more often men, had more comorbidity, and more often received cardiac resynchronization therapy device. Doubling of heart failure duration was an independent predictor of both all-cause mortality (HR 1.26 95% CI 1.17 – 1.37, p < 0.0001), and SCD (HR 1.29 95% CI 1.11 – 1.49, p = 0.0009). The proportion of deaths caused by SCD was not different between heart failure quartiles (p = 0.91), and the effect of ICD implantation on all-cause mortality was not modified by the duration of heart failure (p = 0.59).

Conclusions: Duration of heart failure predicted both all-cause mortality and risk of SCD independently of other risk indicators. However, the proportion of death caused by SCD did not change with longer duration of heart failure and the effect of ICD was not modified by the duration of heart failure.
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