Long-term predictors of mortality in ICD patients with non-ischaemic cardiac disease: impact of renal function

Summary / Zusammenfassung
Randomized trials have demonstrated that implantable cardioverter defibrillator (ICD) therapy may reduce the risk of death in patients with non-ischaemic cardiomyopathy (CMP). In this study, we aimed at determining the long-term benefit of ICD-therapy among patients with dilated CMP (DCM) and among those with other non-ischaemic cardiac diseases (NICDs).

Methods and results: We performed a single-centre longitudinal study to assess the outcomes of 176 patients with NICDs who were implanted with an ICD for primary and secondary prevention of cardiac death. The cumulative survival rate after 1, 2, 5 and 10 years was 91, 87, 78 and 65%, respectively. Mortality risk did not differ significantly between patients with DCM and those with other NICDs. Atrial fibrillation, recurrent ventricular conduction, were associated with higher risk. New York Heart Association (NYHA) function class = III was an independent predictor of adverse outcome among patients with DCM, whereas reduced left ventricular function with ejection fraction <35% and anti-arrhythmics drug use were independent predictors among those with other NICDs. Renal insufficiency with estimated glomerular filtration rate <60mL/min/1.73m² was a strong independent predictor of mortality among all patients with NICD, irrespective of underlying cardiac condition.

Conclusion: In ICD patients with DCM, higher NYHA functional class is associated with adverse outcomes. Impairment left ventricular function and anti-arrhythmic drug use predict higher mortality among patients with non-dilated, NICDs. Impaired renal function is a strong predictor of mortality in all patients with NICD.

Publications / Publikationen

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Implantable cardioverter defibrillator; Non-ischaemic heart disease; Mortality; Sudden cardiac death; Renal insufficiency

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