Titel des Beitrags:
Reduced risk for inappropriate implantable cardioverter-defibrillator shocks with dual-chamber therapy compared with single-chamber therapy: results of the randomized OPTION study.

Abstract:
The OPTION (Optimal Anti-Tachycardia Therapy in Implantable Cardioverter-Defibrillator Patients Without Pacing Indications) trial sought to compare long-term rates of inappropriate shocks, mortality, and morbidity between dual-chamber and single-chamber settings in implantable cardioverter-defibrillators (ICDs) patients. The use of dual-chamber ICDs potentially allows better discrimination of supraventricular arrhythmias and thereby reduces inappropriate shocks. However, it may lead to detrimental ventricular pacing. This prospective multicenter, single-blinded trial enrolled 462 patients with de novo primary or secondary prevention indications for ICD placement and with left ventricular ejection fractions $\leq$ 40% despite optimal tolerated pharmacotherapy. All patients received atrial leads and dual-chamber defibrillators that were randomized to be programmed either with dual-chamber or single-chamber settings. In the dual-chamber setting arm, the PARAD+ algorithm, which differentiates supraventricular from ventricular arrhythmias, and SafeR mode, to minimize ventricular pacing, were activated. In the single-chamber setting arm, the acceleration, stability, and long cycle search discrimination...
criteria were activated, and pacing was set to VVI 40 beats/min. Ventricular tachycardia detection was required at rates between 170 and 200 beats/min, and ventricular fibrillation detection was activated above 200 beats/min. During a follow-up period of 27 months, the time to the first inappropriate shock was significantly longer in the dual-chamber setting arm (p = 0.012, log-rank test), and 4.3% of patients in the dual-chamber setting group compared with 10.3% in the single-chamber setting group experienced inappropriate shocks (p = 0.015). Rates of all-cause death or cardiovascular hospitalization were 20% for the dual-chamber setting group and 22.4% for the single-chamber setting group and satisfied the pre-defined margin for equivalence (p < 0.001). Therapy with dual-chamber settings for ICD discrimination combined with algorithms for minimizing ventricular pacing was associated with reduced risk for inappropriate shock compared with single-chamber settings, without increases in mortality and morbidity. (Optimal Anti-Tachycardia Therapy in Implantable Cardioverter-Defibrillator [ICD] Patients Without Pacing Indications [OPTION]; NCT00729703).