

PREVENT Study Indicates Potential for Reduced Risk of Adverse Clinical Outcomes with Enhanced BIOTRONIK Pacemaker



The potential reduction of unnecessary right ventricular pacing (%VP) has been an important debate in today's cardiac pacemaker therapy as it is directly correlated with the incidence of comorbidities and associated risks. Over time, chronic ventricular pacing causes ventricular dysfunction and is associated with an increased risk of HF hospitalisations and death. Furthermore, it has been shown that minimising the ventricular pacing percentage results in a 40% reduced relative risk of AF, which is an independent predictor of stroke and mortality.^{3,4,5}

PREVENT was a prospective, randomized, international, crossover study enrolling 202 patients with a goal to evaluate whether an enhanced atrioventricular search hysteresis (AVSH) with a longer search interval has an increased benefit in terms of %VP reduction over standard AVSH in patients with a class I pacemaker indication.

The enhanced AVSH technology from BIOTRONIK, called the Intrinsic Rhythm Support (IRSplus) algorithm, incorporates two different functions: the first is scan hysteresis, which better enables the heart to pace on its own by periodically extending the search time for its natural pacing stimulus (the intrinsic AV conduction) over six consecutive atrial cycles. The second is the repetitive hysteresis, which recognises when the heart is not pacing on its own (a consistent loss of intrinsic AV conduction lasting for six consecutive atrial cycles) and switches the mode of the device from extended to basic atrioventricular (AV) delay.

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