Use of an atrial lead with very short tip-to-ring spacing avoids oversensing of far-field R-wave.

Abstract:

The AVOID-FFS (Avoidance of Far-Field R-wave Sensing) study aimed to investigate whether an atrial lead with a very short tip-to-ring spacing without optimization of pacemaker settings shows equally low incidence of far-field R-wave sensing (FFS) when compared to a conventional atrial lead in combination with optimization of the programming. Patients receiving a dual chamber pacemaker were randomly assigned to receive an atrial lead with a tip-to-ring spacing of 1.1 mm or a lead with a conventional tip-to-ring spacing of 10 mm. Postventricular atrial blanking (PVAB) was programmed to the shortest possible value of 60 ms in the study group, and to an individually determined optimized value in the control group. Atrial sensing threshold was programmed to 0.3 mV in both groups. False positive mode switch caused by FFS was evaluated at one and three months post implantation. A total of 204 patients (121 male; age 73±10 years) were included in the study. False positive mode switch caused by FFS was detected in one (1%) patient of the study group and two (2%)
patients of the control group (p = 0.62). The use of an atrial electrode with a very short tip-to-ring spacing avoids inappropriate mode switch caused by FFS without the need for individual PVAB optimization. ClinicalTrials.gov NCT00512915.