

# REDUCING UNNECESSARY RIGHT VENTRICULAR PACING USING THE IRS ALGORITHM

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**Purpose:** The deleterious effect of unnecessary ventricular pacing has conducted most of manufacturers to develop an algorithm to promote spontaneous AV conduction. We analyzed the IRS Plus algorithm (BIOTRONIK), which automatically enlarge the AV delay, in patients receiving double chamber pacemaker.

**Methods:** 53 patients (52% Male; Mean age:  $78 \pm 10$  y.o.) without permanent AV block were included for first double chamber implantation indication. Pacing indications were 38% of AV block (AVB), 24% of sinus node disease (SND = SSS + sinus bradycardia), 34% of brady/tachy syndrome (BTS), and 4% of carotid sinus syndrome (CSS). At discharge, the PR conduction was measured and the pacing mode was individualized. Patients were followed for an additional follow-up at one month and AV sequences counters were collected.

**Results:** On the described population, mean of PR intervals was measured at  $162 \pm 80$ ms. With the IRS Plus activated, the cumulative percentage of ventricular pacing (%Vp) was  $19 \pm 27\%$  (median:6%) for all types of indications. 50% of patients had less than 5% Vp. Repartition of %Vp between pacing indications was: SND:  $7 \pm 19\%$  Vp (median 1% Vp); BTS:  $27 \pm 32\%$  Vp (median 13% Vp) ; AVB:  $22 \pm 27\%$  (median 12% Vp). No adverse event was attributed to IRS algorithm.

**Conclusions:** IRS Plus algorithm avoids unnecessary ventricular pacing in patients implanted with a double chamber pacemaker. Patients with SND experienced greater reduction in %Vp.

