Percentage of patients with atrial arrhythmias at 9 months was significantly lower when the MVP™ function is programmed to [On] only in the AVB group.

Conclusion: In this study in current practice, at 9 months follow-up programming function MVP™ is associated with a significant decrease of ventricular pacing for indications of SD-BTS and AV block. Moreover programming function MVP™ is associated with a significant decrease of percentage of patients with atrial arrhythmias for AVB indications.

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Right ventricular septal pacing – success rate and influence to LV electrical activation

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Purpose: Right ventricular (RV) apex pacing is associated with LV dysynchrony. Alternate RV pacing sites (mid RV septum; the RV outflow tract (RVOT)) were considered, with no clear benefit. The aim of this study is to find a reliable method of septal lead placement and to identify those pacing sites which provide a better LV electrical activation.

Methods: 50 consecutive patients referred for pacemaker implants due to AV block were included. Patients with history of heart failure or LVEF<50% at implant were excluded. All patients had RV leads placed in septal position. RV septum and RVOT were mapped during implant searching for the narrowest paced QRS with an axis as close to normal as possible. Pacing lead position was evaluated during implant using fluoroscopy (AP and LAO 40°) and than by 12 lead ECG and echo. Intra LV dysynchrony was evaluated during pacing using SPWMD in parasternal short axis view and TD1 septal to lateral t. Paced QRS duration and axis were also recorded. A correlation was sought between lead position evaluated by Rx and by echo and between paced QRS duration and axis and LV dysynchrony.

Results: 92%(46) of the patients had the RV lead in septal position (32 in mid RV and 14 in RVOT) while 8%(4 pts) had the RV lead on the RVOT free wall as shown by echo. An anteriorly oriented lead in the left anterior oblique fluoroscopic projection was specific for free wall position while a posterior QRS in DI in RVOT position was suggestive for free wall position on the ECG. No correlation was made between paced QRS axis and LV dysynchron. A QRS duration of >160 ms was associated with significant LV dysynchrony (SPWMD>130 ms and septal to lateral t>70 ms).

Conclusions: RV lead placement on the RV septum can be reliably achieved using a specially shaped stilet and LAO projection for confirmation. A wide paced QRS is correlated with significant intra LV dysynchrony and therefore the pacing site with the narrowest QRS should be sought.

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Relation between clinical response and residual mechanical dysynchrony after cardiac resynchronisation therapy

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Background: The mechanisms of action of cardiac resynchronisation therapy (CRT) and the predictive factors to CRT’s effect are not well known. The mechanical left intra-ventricular dysynchrony (LIVD) has an important physiopathological role in severe left ventricular dysfunction with wide QRS. Several studies compared LIVD before and just after CRT implant but few data are available about LIVD in the mid to long term.

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