

## Leadless endocardial pacing improves symptoms in patients with failed conventional CRT implant in long term follow up

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**OnBehalf:** WiSE-CRT and LV-SELECT study and POST-M REGISTRY

**Background:** The WiSE-CRT (Wireless stimulation endocardial) system has advantages over conventional epicardial CRT. Whenever conventional CRT failed to implant or failed to echocardiographic response, the WiSE-CRT was implanted as part of the WiSE CRT study (N = 13), as part of the LV-SELECT study (N = 35) or as part of the POST-M REGISTRY (N = 117) over the last 8 years. All these studies have reported high rates of clinical and echocardiographic response compared to conventional CRT.

**Objectives:** The purpose of this analysis was to determine the safety and clinical response in the largest available number of implanted patients (pts) with long term follow up of 2 years and the first, second and third generation of WiSE-CRT devices.

**Method:** All pts undergoing a WiSE-CRT implantation as part of the WiSE CRT study (N = 13), as part of the LV-SELECT study (N = 35) or as part of the POST-M REGISTRY (N = 117) were analysed (N = 165). Pts were followed-up for 24 months and considered CRT responders if an improvement in NYHA  $\geq 1$  class from baseline (pre-implant) was achieved.

**Results:** In total, 165 pts were implanted, demographics include:  $68.2 \pm 9.6$  year's old, 81.8% male, 49.7% with history of AFib and 54.5% non-ischaeamic aetiology. The mean intrinsic QRS duration was  $165.0 \pm 32.3$  msec (28 pts pace-maker dependent). 161 pts had the system successfully implanted with no major complications, 3 (1.8%) pts developed a pericardial effusion and 1 (0.6%) electrode was lost during implantation and recovered surgically. During the 24-month follow-up period, 20 (12.1%) pts died from any cause, 4 (2.4%) pts developed TIA or Stroke and 15 (9.1%) pts had pocket or transmitter infection. There was a significant improvement in NYHA functional class in 63.6% pts and an average improvement of  $-26.1$  ( $-45.1$ ,  $-7.1$ ) msec in QRS duration.

**Conclusion:** Despite a history of failed conventional CRT implantation, pts undergoing CRT upgrades with a WiSE-CRT have a high success rate and a complication rate similar to previously described. In addition endocardial LV pacing led to symptomatic improvements in 64% of patients reaching the 24 month of follow up.

Abstract Figure 1: Forest Plot NYHA Responder Rat

