The Clinical benefit of MultiPoint Pacing in Heart failure patients: preliminary results from a randomized and multicenter study in the Middle East.

Abdul Mohsen Al-Musaad  
Fayez Boukhari  
Raed Sweidan  
Yahya Al Hebaishi  
Ahmed Al Fagih  
Najib Al-Rawahi  
Amjad Al-Mandalawi  
Mohammed Hashim  
Ahmad Hersi  
Bandar Al-Ghamdi  
Mohammed Amin  
Mohammed El Maghawry  
Naeem AlShoaibi  
Antonio Sorgente  
Maria Luisa Loricchio  
Ghaliah Al Mohani  
Ismail Al Abri  
Edmon Khammo  
Nazar Sudan  
Mohamed Sayed

**Introduction:** Cardiac Resynchronization Therapy (CRT) has been established as adjunctive therapy for heart failure patients with electrical dysynchrony. Despite the improvement of pacing technology and features minimizing the rate of non-responders to such therapy remains the goal. MultiPoint™ Pacing (MPP) is one of the latest pacing technologies that provide the opportunity to improve CRT response by pacing the left ventricle (LV) from 2 electrodes along a quadripolar LV lead. Acute and chronic benefits of MPP have been shown in several non-randomized clinical studies. In this randomized multicenter trial we evaluated the long-term clinical benefits of MPP.

**Methods:** In this prospective, randomized, multicenter study, patients with LBBB, meeting an approved indication for CRT-D implant according to ESC/EHRA guidelines underwent CRT implantation with St Jude Medical (now Abbott) CRT-D device with a quadripolar LV lead. Those with non-LBBB or a history of AF within 30 days prior to the enrollment were excluded. Patients were enrolled in 13 centers in 7 countries in the Middle East and randomized to receive either MPP ON (MPP arm) or empirically optimized conventional bipolar pacing (BIV arm) immediate post-implant. MPP was programmed based on the RV-LV conduction time, assessed by the VectSelect™ feature. Transthoracic echocardiogram was performed pre-implant and at 6 months post-implant and analyzed by a core lab to assess CRT response. The primary endpoint was defined as a reduction in LV end-systolic volume (ESV) of >15% at 6 months.

**Result:** A total of 182 patients were enrolled in the study, successful implantation of LV quadripolar leads were achieved in 174 patients (95.60%) and equally randomized in the two group. Thirty two
Conclusion: The study has been successfully executed and final analyses suggest a positive trend. Additional results will be presented at the conference.