Event Committee. Secondary endpoints, presented here, included a composite of cardiac deaths and HF hospitalizations and cardiovascular (CV) hospitalizations, at 3 years. Treatment groups were compared based on an intention-to-treat principle.

Results: 650 pts were enrolled in 43 centers in 7 countries (72.4±11.2 years, 55.2% males, 52.0% SND, 41.8% intermittent AVB and 6.2% permanent AVB) and implanted with a dual chamber pacemaker. 632 pts were randomized (314 in SafeR and 318 in DDD). Median%Vp was 11.5% in SafeR vs. 93.6% in DDD (p<0.001). The time to cardiac death or first HF hospitalization (figure) and the time to first hospitalization for CV event were both significantly increased in SafeR vs. DDD group (p=0.018 and p=0.050, respectively). The duration of hospitalization due to CV reason was significantly decreased in SafeR vs. DDD (1.55±5.4 vs. 3.05±11.6 days, p=0.037).

Conclusion: As compared to DDD, the SafeR pacing mode significantly increased the time to cardiac death or first HF hospitalization, the time to first CV hospitalization and significantly reduced the duration of hospitalizations for any CV reason.

Results of cardiac transplantation according access modalities. Single centre eight years experience

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Objectives: We evaluated the results of cardiac transplantation according access modalities.

Methods: Between 2005 and 2012, 562 patients underwent isolated cardiac transplantation, divided into five groups: patients under left ventricular assist device (group LVAD, n=27, 5%), patients under bi-ventricular assist device (group Bi-VAD, n=25, 4%), patients transplanted under ECMO (group ECMO, n=90, 16%), patients transplanted according the SuperUrgence1 waiting list without ECMO (group SU1 NOECMO n=131, 23%), patients transplanted on the standard waiting list (group Liste, n=289, 53%). A comparison between the periods 2005/2008 and 2009/2012 was made for the groups LVAD+Bi-VAD, ECMO, SU NOECMO and Liste.

Results: The occurrence of primary graft dysfunction was: 26% (group LVAD), 44% (group Bi-VAD), 42% (group ECMO), 21% (group SU1 NOECMO), 26% (group Liste). The period analysis showed no change in primary graft dysfunction over the time: 33% vs 36% (group LVAD+Bi-VAD), 50% vs 35% (group ECMO), 23% vs 20% (group SU1 NOECMO), 28% vs 24% (group Liste). One-year mortality was: 15% (group LVAD), 20% (group Bi-VAD), 31% (group ECMO), 23% (group SU1 NOECMO), 28% (group Liste).

Conclusions: Actually, stable patients on the standard waiting lists represent only half the transplantation activity. Patients transplanted under long-term circulatory support, especially LVAD, have the best results. SuperUrgence1 waiting list patients have good results if they not require pre-transplant ECMO support. Need for a pre-transplant ECMO is associated with a higher operative mortality. Outcomes improved over the time for every group of patients.

A proteomic score improves risk stratification in stable chronic heart failure patients

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Background: Risk stratification of patients with stable chronic heart failure (CHF) is critical to better identify those who may benefit the most from invasive strategies such as heart transplantation.

Methods: To improve cardiovascular (CV) death prediction in CHF, we performed a proteomic analysis using high throughput surface enhanced laser desorption ionization – time of fight – mass spectrometry (SELDI-TOF-MS). Plasma samples were pre-treated to access the deep proteome. The proteomic analysis was first performed in a case (CV death within 3 years) /control (survivors at 3 years) study including 198 patients with a left ventricular ejection fraction (LVEF) <45%. A proteomic score was developed in this derivation population using the support vector machine (SVM) method. The score was then validated in an independent cohort of 309 consecutive patients (CV death at 3 years) with CHF.

Results: Altogether, 203 ion m/z peaks were detected. Among them, 42 peaks were significantly differentially expressed between cases and controls after Bonferroni correction (P value at 0.00025). Then, the SVM method was applied to develop a proteomic score. In the derivation population, the score level was higher in cases as compared to controls: 0.7 vs. 0.25 (P=5.10-29). The ROC curve showed an AUC of 0.87 to predict CV mortality. In the validation population, the score level was still higher in patients who experienced a CV death as compared to survivors: 0.53 vs. 0.39 (P=0.0002). The ROC curve showed an AUC of 0.68. After adjustment on confounders (NYHA class, LVEF, BNP, creatinine, Peak VO2), the score was still significantly associated with CV death (HR=15.1, P=0.007) and it allowed a significant improvement of CHF patient reclassification. The net reclassification index (NRI) and the integrated discrimination improvement (IDI) reach both significant p values.

Conclusion: Proteomic analysis of low abundance plasma proteins is highly promising to improve CV death risk prediction in CHF.