

### Data of the patients with systolic heart failure before and after vitamin D supplementation

	Before Vitamin D Supplementation	After Vitamin D Supplementation	P Value
25-OH vitamin D level (ng/ml)	11.66 ± 5.12	40.720 ± 14.74	<0.001
6- MWT(m)	461.0 ± 79.97	559.25 ± 71.96	<0.001
LVEF (%)	31.70 ± 3.40	35.50 ± 4.00	<0.001
LVDd (mm)	60.00 ± 9.67	57.95 ± 9.21	<0.001
LVSd (mm)	50.40 ± 6.40	48.10 ± 6.18	<0.001
LA (mm)	42.5 ± 6.50	42.40 ± 6.60	0.818
RA (mm)	38.2 ± 6.06	38.4 ± 6.04	0.729
RV (mm)	37.8 ± 5.81	38.1 ± 5.83	0.670
Calcium (mg/dl)	9.46 ± 0.45	9.64 ± 0.50	0.330
Phosphate (mg/dl)	3.48±0.97	3.52 ± 0.88	0.681
Sodium (mmol/l)	138.45 ± 3.42	137.75 ± 3.71	0.283
PTH (pg/ml)	62.95 ± 40.40	46.45 ± 32.24	0.120
ALT (U/l)	20.45 ± 9.26	22.15 ± 10.91	0.191

6-MWT indicates 6 minute walk test; LVEF, left ventricle ejection fraction; LVDd, left ventricle end diastolic diameter; LVSd, left ventricle end systolic diameter; LA, left atrium; RA, right atrium; RV, right ventricle; PTH, parathyroid hormone; ALT,alanine amotransferase.

### PP-050

#### Effects of Levosimendan and Dobutamine on Systolic Time Intervals in Patients with Acute Decompensated Heart Failure

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**Purpose:** Levosimendan has been shown to have a better hemodynamic profile over dobutamine in increasing cardiac output and reducing pulmonary wedge pressure in patients with acute decompensated heart failure (HF). Data comparing the effect of levosimendan with dobutamine on systolic time intervals is lacking. Therefore, the aim of this study was to evaluate the effects of levosimendan and dobutamine on systolic time intervals.

**Methods:** Fifty patients with NYHA class III-IV decompensated HF requiring inotropic support, LVEF <35% and in sinus rhythm were randomized (in a 1:1 design) to levosimendan (n=25) or dobutamine (n=25). Both inotropic agents were administered as a continuous 24-h infusion (levosimendan at a dose of 0.2 µg/kg/min with a preceding bolus dose of 12 µg/kg and dobutamine at a dose of 10 µg/kg/min without a bolus dose). All patients underwent echocardiographic evaluation before and at the end of inotropic infusion. LVEF, heart rate-corrected electromechanical systole (QS2i), pre-ejection period (PEP) and left ventricular ejection time (LVET) were measured.

**Results:** There was no significant difference in baseline clinical characteristics and laboratory parameters between levosimendan and dobutamine groups. As compared with their baseline values, LVEF and LVET significantly increased at the end of both levosimendan and dobutamine infusions with a similar extent in both groups (table). Levosimendan significantly shortened QS2i and PEP. Dobutamine shortened PEP, but showed no effect on QS2i.

**Conclusions:** This study suggests that both levosimendan and dobutamine are almost equally effective in increasing LVET and in shortening PEP. However, levosimendan appears to have additional advantage over dobutamine in shortening QS2i, indicating a fairly strong positive inotropic effect.

#### Systolic time intervals during inotropic therapy

	Before Dobutamine	After Dobutamine	p	Before Levosimendan	After Levosimendan	p
LVEF, %	27.9±4.6	30.8±4.7	0.0001	26.0±5.5	30.6±5.4	0.0001
QS2i, ms	543±24	536±27	0.112	523±38	509±38	0.003
PEP, ms	117±16	106±18	0.0001	120±22	109±21	0.001
LVET, ms	242±38	252±38	0.0001	230±28	240±25	0.039

### PP-051

#### The Better Outcomes Associated with Warfarin use in Patients with Heart Failure in Either Atrial Fibrillation or Sinus Rhythm

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**Background:** Warfarin use and associated outcomes in patients with chronic heart failure (HF) have not been well described previously. We hypothesized that warfarin is associated with lower risks of cardiovascular mortality in patients with sinus rhythm, atrial fibrillation and pacemaker rhythm.

**Methods:** We examined the outcomes in patients who were followed -up between January 2003 and April 2011 in the out-patient clinic due to chronic HF. 671 HF patients were enrolled into the study group (427 male, 244 female, mean age, 64 ± 13 years; mean ejection fraction, 27 ± 12%, mean NYHA 2.8±0.5, 62% with coronary artery disease). 445 patients had sinus rhythm, 165 patients had atrial fibrillation and 61 patients had pacemaker rhythm.

**Results:** Two hundred -fifty three patients (38%) died due to cardiovascular reasons. 210 (31 %) patients were on warfarin treatment. However 27 patients (63%) who were not taken warfarin died, 39 patients (32%) who were taken warfarin died in atrial fibrillation (p<0.001) due to cardiovascular reasons during follow-up. Although 149 patients (40%) who were not on warfarin treatment died and 18 patients (24 %) who were on warfarin treatment died in sinus rhythm due to cardiovascular reasons during follow-up (p=0.006). We did not find any statistical difference between patients with warfarin user and patients who were not user in patients with pacemaker rhythm.

**Conclusion:** It seemed patients who were taken warfarin had better outcomes in patients with atrial fibrillation and in patients with sinus rhythm in chronic HF.

### PP-052

#### Depression Predicts Absence of Regular Physical Activity in Outpatients with Systolic Heart Failure

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Heart failure (HF) is a common disease worldwide. On the other hand, regular physical activity is beneficial in terms of outcomes. In this study, parameters which influence regular activity were investigated.

100 consecutive outpatients (age 65±13 years, 54 males, 46 females) with stable systolic heart failure (31±10% ejection fraction) were enrolled. All patients were asked for engagement with regular physical activity, and evaluated with Beck depression inventory (BDI).

**Results:** 41 out of 100 patients stated that they engage regular physical activity with a median of 3 days per week (ranging from 1-7 days/week). In the univariate analysis, absence of regular physical activity was associated with female gender, lower ejection fraction (EF), higher NYHA functional class, nonischemic etiology, presence of therapy with spironolactone, higher BNP, BUN, longer duration of HF, lower plasma sodium, higher tricuspid annular excursion (Table 1). Patients were classified into two as those with presence of at least mild depression (BDI score ≥14) versus those without depression. It was found that at least mild form of depression (BDI ≥14) was found in 36.6% of patients having regular physical activity whereas, depression was present in 88.1% of patients not having regular physical activity. Of note, severe depression (BDI ≥29) was present in 7.3% and 49.2% respectively. Beck depression score was able to predict absence of engagement in regular physical activity in patients with HF (AUC=0.827, p<0.001). In the stepwise regression analysis, it was found that female gender (p=0.010, ExpB=4.251, 95%CI:1.417-12.751), having at least mild depression by BDI (p=0.010, ExpB=4.639 95% CI:1.451-14.829) and EF (p=0.017, ExpB=0.928, 95% CI:0.873-0.986) were found to be independent predictors of absence of regular physical activity in stable outpatients with systolic HF.

**Conclusion:** Depression could potentially influence engagement in regular physical activity in outpatients with systolic HF.