Abstract: **P1673**

**Valsartan improves ventriculo-vascular coupling index dose-dependently in heart failure with reduced left ventricular ejection fraction**

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**Objectives:** We evaluated the effect of forced titration of valsartan in patients with HF.

**Backgrounds:** Heart failure is a clinical syndrome that causes significant morbidity and mortality. Recently, the ventriculo-vascular coupling index (VVI) was introduced as an independent prognostic factor that reflects the overall cardiovascular performance index in HF. However, it is not well elucidated whether forced titration of valsartan is effective or not on VVI in patients with HFrEF.

**Methods:** We evaluated the effect of valsartan stratified by dosage (non-ceiling dose vs ceiling dose). One-hundred-thirty-eight patients (59.3 ± 12.4 years old; 66% male) were force-titrated to the ceiling dose (n=81), but 57 patients did not reach the ceiling dose (non-ceiling dose; n=57). Biochemical studies including NT-proBNP, echocardiography including VVI, the treadmill test and the activity scale index (KASI) were assessed at baseline and after 24-weeks of therapy.

**Results:** The six month follow up showed significant improvement in NT-proBNP, LVEF, E/E’ ratio, and activity scale index in both groups. LVMI was significantly improved in the ceiling dose group but not in the non-ceiling dose group. Interestingly, a significant improvement in VVI was only observed in the ceiling dose group (from 2.4 ± 0.6 to 1.8±0.5, p<0.01).

**Conclusions:** The ceiling dose of valsartan for six months showed better improvement of VVI in patients with HFrEF compared with non-ceiling doses. We may need to consider escalating valsartan to the ceiling dose for the overall cardiovascular performance index in patients with HFrEF.
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