**PREDICTIVE FACTOR FOR CENTRAL SLEEP APNEA AND EFFECTS OF CSA ON LEFT VENTRICULAR FUNCTION IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION**

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Aims: This study was designed to determine the risk factors for central sleep apnea (CSA) in patients with acute myocardial infarction (AMI) and examine the effects of CSA on the recovery of left ventricular (LV) function because there may be a path that CSA can further deteriorate LV function.

Methods: The present study included 197 patients who underwent primary percutaneous coronary intervention (PPCI) within 12 h from the onset. Polysomnography found 20 CSA patients with apnea-hypopnea ≥ 15 events/h. The serial changes of LV ejection fraction (LVEF) and end-diastolic volume index (LVEDVI) during admission were calculated using left ventriculograms immediately after PPCI and at 14 day.

Results: First, logistic regression analysis showed that logarithmic peak creatine kinase (CK) value was the only positive predictor for CSA (odds ratio=1.78, p=0.028). Second, 55 control patients who matched peak CK value with that of CSA patients were selected. CSA patients showed significantly lower delta LVEF and higher delta LVEDVI (-3.6±12.7% vs. 4.5±7.8%, p=0.010; 24.1±22.6 mL/m2 vs. 3.6±21.7 mL/m2, p=0.010). Multiple regression analysis showed that CSA was negatively correlated with delta LVEF and was positively correlated with delta LVEDVI.

Conclusions: Larger infarct size was a risk factor for CSA. It is probable that CSA can inhibit the recovery of LV contraction and enhance LV remodeling despite of comparable infarct size in matched control patients.