学位論文の要旨

所 属 三重大学大学院医学系研究科 生命医科学専攻 病態制御医学講座 氏 名 杉浦 英美喜

主論文の題名

Reversible Right Ventricular Regional Non-Uniformity Quantified by Speckle-Tracking Strain Imaging in Patients With Acute Pulmonary Thromboembolism

主論文の要旨

We evaluated the effects of acute right ventricular (RV) pressure overload (PO) on RV systolic function and its regional uniformity using speckle-tracking strain analysis in patients with acute pulmonary thromboembolism (APTE). Twenty-three patients with APTE (59 ± 16 years) and 23 age-matched and gender-matched normal subjects were examined. Global and segmental longitudinal RV peak systolic strain (PSS) was analyzed using speckle-tracking strain echocardiography. The heterogeneity of RV regional functions was assessed by calculatin g the standard deviation (SD) from 6-segmental PSS divided by the absolute value of PSS. The SD of the heart rate-corrected intervals from QRS onset to PSS for the 6 segments was used to quantify RV dyssynchrony. Patients with APTE had reduced PSS, large heterogeneity, and large dyssynchrony with basal-mid RV contraction delay (global PSS: $-14 \pm 4*$ vs. $-25 \pm 3\%$, heterogeneity: 0.54 ± 0.26 * vs. 0.24 \pm 0.09, dyssynchrony: 91 \pm 38* vs. 25 \pm 10 msec, *p<0.0 5 vs. controls for all comparisons). After the amelioration of acute RVPO by primary treatments, both RV heterogeneity and dyssynchrony returned to normal values. In conclusion, speckle-tracking strain echocardiography can effectively quantify reversible RV regional non-uniformity and can characterize the pattern of RV regional impairment in patients with APTE.