

POSTER PRESENTATION

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# Myocardial triglyceride content in patients with left ventricular hypertrophy: comparison between hypertensive heart and hypertrophic cardiomyopathy

Eiryu Sai<sup>1\*</sup>, Kazunori Shimada<sup>1</sup>, Takayuki Yokoyama<sup>1</sup>, Shuji Sato<sup>2</sup>, Makoto Hiki<sup>1</sup>, Tetsuro Miyazaki<sup>1</sup>, Shigeki Aoki<sup>3</sup>, Hiroyuki Daida<sup>1</sup>

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## Background

Proton magnetic resonance spectroscopy (<sup>1</sup>H-MRS) enables to assess the myocardial triglyceride (MTG) content, which is reported to be associated with cardiac dysfunction and morphology accompanied by metabolic disorder and cardi-hemodynamic status. However, clinical usefulness of measurement of MTG content in patients with left ventricular hypertrophy (LVH) has not been investigated.

## Methods

To quantify MTG content, we performed <sup>1</sup>H-MRS in 39 subjects with LVH. Left ventricular (LV) function was measured by cardiac magnetic resonance imaging. We divided into HHD and HCM groups on the basis of histology and/or the late gadolinium enhancement pattern.

## Results

The MTG content was significantly higher in the HHD group than in the HCM group ( $2.14 \pm 1.29\%$  vs  $1.09 \pm 0.70\%$ ;  $P=0.0009$ ). In the HCM group, MTG content was significantly associated with LV mass ( $r = -0.41$ ,  $P < 0.04$ ). In the HHD group, MTG content was significantly associated with LV end-diastolic volume, stroke volume, and cardiac output ( $r = -0.63$ ,  $r = -0.76$ ,  $r = -0.62$ , all:  $P < 0.05$ ).

## Conclusions

The MTG content of HCM was negatively correlated with LV mass but not LV function. These results suggested

that the measurement of MTG content by <sup>1</sup>H-MRS might be useful for grading HCM pattern as well as distinguishing between HCM and HHD.

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## Authors' details

<sup>1</sup>Cardiovascular Medicine, Juntendo University, Graduate School of Medicine, Tokyo, Japan. <sup>2</sup>Radiology, Juntendo university hospital, Tokyo, Japan.

<sup>3</sup>Radiology, Juntendo university, graduate school of medicine, Tokyo, Japan.

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<sup>1</sup>Cardiovascular Medicine, Juntendo University, Graduate School of Medicine, Tokyo, Japan

Full list of author information is available at the end of the article