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Letter to the Editor

## “Impact of epicardial adipose tissue volume quantified by non-contrast electrocardiogram-gated computed tomography on ergonovine-induced epicardial coronary artery spasm”

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Dear Editor,

We have read with great interest the article by Ito and colleagues [1]. The authors examined epicardial adipose tissue volume (EATV) quantified with non-contrast ECG-gated CT in patients with and without coronary spasm based on the ergonovine-induced provocation test, which demonstrated increased EATV associated with epicardial coronary artery spasm.

Prior to this study, we have also recently demonstrated the alterations of perivascular adipose tissue volume (PVATV) in vasospastic angina (VSA) patients [2]. In our study, besides calculating the EATV based on ECG-gated CT, we divided the EATV into three segments, including PVATV<sub>LAD</sub>, PVATV<sub>LCX</sub> and PVATV<sub>RCA</sub> in line with the coronary territories [2]. Our study demonstrated that the segmental coronary PVATV is increased at the spastic coronary arteries of VSA patients.

Importantly, we have demonstrated that adventitial inflammatory changes (e.g., vasa vasorum formation) and Rho-kinase activity are

enhanced at the spastic coronary segment in animals and humans [3–5]. These our findings indicated that not systemic but local adventitial inflammation including PVAT plays important roles in the pathogenesis of coronary spasm, and thus, it could be speculated that increased PVATV of the spastic coronary segment might result in enhanced overall EATV in the study by Ito and colleagues [1].

Although volumetric enlargement of the PVAT in the VSA patients was noted in our study, it remains to be elucidated whether PVAT is functionally altered by using FDG PET (UMIN000016675), which may provide further insights into the PVAT and mechanisms of coronary spasm.

## References

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