

## Factors Related with Both Epicardial Fat Thickness and Left Ventricular Geometry

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Dear editor:

We have read with great interest the article about the association between epicardial fat thickness and left ventricular geometry in patients with newly diagnosed hypertension which was published by Şeker et al. It is reported that fat thickness is higher in patients with abnormal left ventricular geometry than control group. Diseases effecting the left ventricular geometry such as diabetes, coronary artery diseases, heart failure, ischemic heart disease and severe valvular diseases are described as exclusion criteria.<sup>1</sup>

There are several factors and diseases that can affect concomitantly both left ventricular geometry and epicardial fat thickness. Vitamin D deficiency is a good example for these factors. Vitamin D levels are independently associated with left ventricular geometry and it is implicated that lower levels than 30 ng/mL and higher levels than 38 ng/mL are related with abnormal geometry while the levels between 30-37 ng/mL are associated with better ventricular geometry.<sup>2</sup> Gürses et al. reported that epicardial fat thickness is significantly higher in premenopausal women with vitamin D deficiency than counterparts with normal vitamin D levels and vitamin D replacement reduces the epicardial fat thickness.<sup>3</sup>

Thyroid dysfunction is another condition that affects

both epicardial fat thickness and left ventricular geometry. It is reported by Bengel et al. that thyroid hormone replacement ameliorates left ventricular geometry in hypothyroidic patients.<sup>4</sup> Subclinical and overt hypothyroidism is also related with increased epicardial fat thickness.<sup>5</sup>

To conclude, thyroid dysfunction and vitamin D deficiency are frequent disorders in the population and these conditions have effects on epicardial fat thickness and left ventricular geometry. Therefore relationship between epicardial fat thickness and left ventricular geometry can be as a result of vitamin D deficiency or thyroid dysfunction instead of an independent relationship.

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