

## Author's Reply

To the Editor,

We sincerely thank the author(s) for their interest and valuable comments on our manuscript titled "Evaluation of the effect of non-ergot dopamine agonists on left ventricular systolic function with speckle tracking echocardiography" (1).

As you mentioned, heart failure (HF) is classified according to left ventricle ejection fraction (LVEF) and includes a wide range of patients—those with preserved LVEF ( $\geq 50\%$ ), those with reduced LVEF ( $< 40\%$ ), and those with mildly reduced LVEF ( $40\%–49\%$ ) (2).

The diagnosis of HFpEF is more difficult than that of HFrEF. Patients with HFpEF generally have increased LV wall thickness and/or increased left atrial (LA) size as a sign of increased filling pressures, and most have diastolic dysfunction in echocardiographic examination.

The term HF is used to describe the symptomatic syndrome. As ESC guidelines recommend, HF diagnosis should be evaluated based on the patient's prior clinical history [e.g., coronary artery disease (2), arterial hypertension, diuretic use], presenting symptoms, and physical examination. If at least one element is abnormal, then plasma natriuretic peptides should be measured. Our study patients were asymptomatic, and their physical examination results were normal; therefore, HF was not considered in our patients, and we did not measure natriuretic peptides. If we had measured these, then we may have obtained additional information.

The main aim of our study was to evaluate possible subclinical deterioration of the LV. We evaluated systolic functions with speckle-tracking echocardiography-based strain, and global longitudinal strain values were in the normal ranges in the study groups. We evaluated the diastolic functions with conventional and tissue Doppler echocardiography. An important structural parameter in diastolic function determination is LA volume index, which was in the normal range in our patients. The E/e' value, an important functional indicator of diastolic dysfunction, were in the normal range in our patients.

Future prospective studies with larger sample sizes should be planned, and particularly adding biomarkers, such as natriuretic peptides, to the investigation may provide additional information.

**Hilal Erken Pamukcu**, **Demet Menekşe Gerede Uludağ\***,  
**Bahar Tekin Tak<sup>1</sup>**, **Mine Hayriye Sorgun\*\***, **Tolga Han Efe**,  
**Aynur Acıbuca\***, **Cenk Akbostancı\*\***, **Sibel Turhan\***  
 Department of Cardiology, Dışkapı Yıldırım Beyazıt Training and Research Hospital; Ankara-Turkey  
<sup>1</sup>Department of Cardiology, Türkiye Yüksek İhtisas Training and Research Hospital; Ankara-Turkey  
 Departments of \*Cardiology, and \*\*Neurology, Ankara University Faculty of Medicine; Ankara-Turkey

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**Address for Correspondence:** Dr. Hilal Erken Pamukcu, Dışkapı Yıldırım Beyazıt Eğitim ve Araştırma Hastanesi, Kardiyoloji Bölümü, Şehit Ömer Halisdemir Caddesi, Dışkapı 06110 Ankara-Türkiye  
 Phone: +90 532 781 37 14  
 E-mail: hilalerkenn@gmail.com  
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## An overlooked aspect in the assessment of systolic pulmonary arterial pressure in female patients with hyperthyroidism

To the Editor,

I read the article entitled "Echocardiographic evolution of pulmonary hypertension in female patients with hyperthyroidism" with great interest (1). The authors have demonstrated that pulmonary hypertension (PH), with various severities, was present in 73 of the total 142 female patients with hyperthyroidism. To detect PH in the study population, estimated systolic pulmonary arterial pressure (sPAP) was measured by transthoracic echocardiography (TTE). Moreover, patients who had an estimated sPAP  $\geq 35$  mm Hg at rest were considered to have PH. I commend the authors for their complementary contribution to the area of PH in patients with hyperthyroidism.

PH is defined as an increase in mean PAP  $\geq 25$  mm Hg at rest, as assessed by right heart catheterization (RHC) (2). Thus, RHC is considered the gold standard for the diagnosis of PH. However, TTE is recommended for screening for the presence of PH (2). Therefore, TTE is frequently used to estimate sPAP, to screen for PH, and to monitor progression over time because it is non-invasive, widely available, and relatively inexpensive.

The estimation of sPAP is based on the peak tricuspid regurgitation velocity (TRV) taking into account right atrial pressure (RAP), as described by the simplified Bernoulli equation (3). RAP can be estimated by TTE based on the diameter and respiratory