Strain can hide some states

To the Editor,

We read the article entitled as "Speckle-tracking strain assessment of left ventricular dysfunction in synthetic cannabinoid and heroin users" with great interest (1). We congratulate the authors for performing such a trial regarding addictive substance and strain echocardiography and have some minor comments regarding the trial methodology. Authors have stated that "the trial was prospective and double-blind…". We suggest that the authors may use "observational case-control study" and "unawareness" instead of "prospective" and "double-blind". As we know, the main problem in observational studies is the presence of confounders and selection bias, which are prevented in randomized controlled trials through randomization and blinding. In addition, the authors concluded that SCBs are potential cause of subclinical LV dysfunction; however, reducing the levels of some LV strain parameters within the normal range might not indicate subclinical LV dysfunction, and the clinical significance of a small amount of decrease in the LV strain is unclear. We may not exclude the chance factor for statistical significance (p value) because of low sample size and low control number.

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1. Demirkıran A, Albayrak N, Albayrak Y, Zorkun CS. Speckle-tracking strain assessment of left ventricular dysfunction in synthetic cannabinoid and heroin users. Anatol J Cardiol 2018; 19: 388-93.

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Author`s Reply

To the Editor,

We sincerely thank the author(s) for their interest and valuable comments on our manuscript titled "Speckle-tracking strain assessment of left ventricular dysfunction in synthetic cannabinoid and heroin users" that published in Anatol J Cardiol 2018; 19: 388-93 (1) and their extremely constructive feedback. In their comments, they have raised important points from their aspects and encouraged us to look at our science from different perspectives. We certainly keep their comments and proposals in mind and may consider them for future study design. We have used the word "potential" to indicate "the unknown and uncertain points on this subject" and "to avoid excluding the chance factor, therefore possible misunderstandings".

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Bizarre ST elevation

To the Editor,

We have read the case report with great interest (1). We have some comments regarding the electrocardiography ST elevation pattern presented in the report. We have a little suspicion about an alternate diagnosis. There are near-identical electrocardiography samples in different case reports with the diagnosis of hypertrophic cardiomyopathy (2, 3). Presence of notching at precordial lead V3 may support anterolateral or apical hypertrophic cardiomyopathy. Further, presence of fibrosis at apical or anterolateral hypertrophic cardiomyopathy on cardiac magnetic resonance imaging (MRI) is consistent with notching at lead V3 (4). In this case, authors did not mention about cardiac MRI. If they performed cardiac MRI in this patient, results may suggest apical or anterolateral hypertrophic cardiomyopathy. In addition, we know that obtaining good echocardiographic image in older patients is difficult. Therefore, taking good image at unusual localization of hypertrophic car-

diomyopathy and especially apical or anterolateral hypertrophic cardiomyopathy with transthoracic echocardiography has important limitations for making diagnosis (5, 6). HCM is associated with a thick and noncompliant left ventricle (LV) resulting in some degree of diastolic dysfunction in nearly all patients. Therefore, patients with HCM are particularly dependent on normal atrial kick to provide optimal LV filling and cardiac output. Patients with HCM are prone to both atrial and ventricular arrhythmias (7). This phenomenon causes atrial dilatation in patients with HCM. In the presented case, the patient has biatrial dilatation and atrial fibrillation. These findings might be due to HCM. At these instances, in the case of diagnosis, cardiac MRI is required to clarify the diagnosis. With the findings mentioned at this paper, the authors' diagnosis of early repolarization abnormality is suspicious and calls for more evidence.

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Author`s Reply

To the Editor,

Thank you for your interest on our case report (1). We appreciate your elaborate comments.

Electrocardiographic (ECG) ST elevation associated with left ventricular hypertrophy is due to delayed depolarization of the epicardium, which leads to discordant repolarization abnormalities. The ECG characteristics of left ventricular hypertrophy are ST elevation in right and septal precordial leads and ST depression in lateral leads (2). Generally, ST elevation is discordant with the QRS direction.

Hypertrophic cardiomyopathy has similar ECG findings with left ventricular hypertrophy. Apical variant of the hypertrophic cardiomyopathy (Yamaguchi syndrome) is frequently associated with deep symmetrical T wave inversion (giant T waves).

In our patient, apical hypertrophic cardiomyopathy was the least likely diagnosis. Echocardiographic image quality was good; left ventricular apex was clearly visible, left ventricular cavity mid and apical segments had normal thickness, and there was no gradient throughout the left ventricle.

Atrial fibrillation (AF) is quite common in the elderly. In addition to the advanced age (i.e., 68-years old), our patient also had long-standing hypertension. Advanced age and hypertension are the most common risk factors for the development of AF (3). Diastolic dysfunction is frequently observed in elderly women with hypertension. Our patient carries three major risk factors for the development of diastolic dysfunction: increased age, female sex, and hypertension. Biatrial dilatation is the hallmark finding of diastolic dysfunction. Therefore, we believe that there are enough risk factors for the development of AF, i.e., increased age, hypertension, diastolic dysfunction, and consequent biatrial dilatation.

In addition, the ECG presented in Figure 1 shows classic type 2 Brugada pattern and, ST elevation on V1 and V2, which were absent in the ECG performed in the previous year, which is pre-

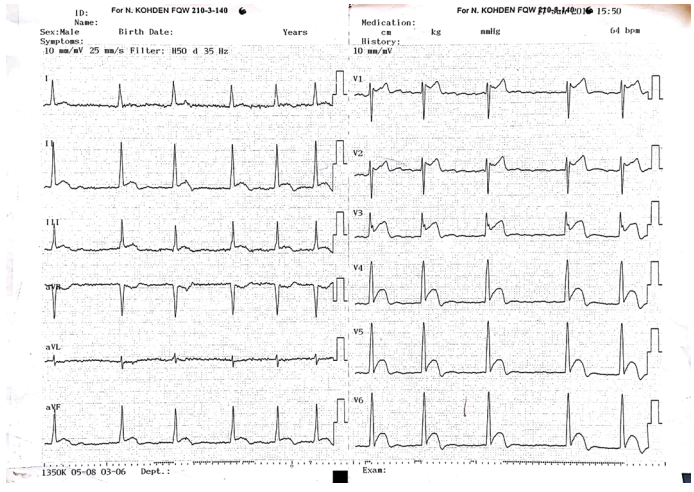

Figure 1. ECG shows atrial fibrillation. ST elevations are most prominent in V3, which also has a notch on the descending part of QRS compatible with early repolarization