Assessment of epicardial fat and carotid intima media thickness in gestational hypertension

Altin C, Ozsoy HM, Gezmis E, Yilmaz M, Balci S, Tekindal MA, Sade LE, Muderrisoglu H
Baskent University Medical Faculty, Izmir, Turkey

Objective
It is well known that preeclampsia (PE) is one of the most important causes of mortality and morbidity in pregnancy. We aimed to investigate epicardial fat thickness (EFT) and carotid intima media thickness (CIMT), which are predictors of subclinical atherosclerosis, in third trimester gestational hypertension (GHT).

Methods
72 patients (37 PE and 35 controls) were enrolled. Patients with diabetes mellitus, chronic hypertension and cardiovascular disease (CVD) were excluded. Standard transthoracic 2D echocardiography was used to measure EFT on the free wall of the right ventricle at end-diastole from the parasternal long-axis view. B-mode duplex ultrasound was used to measure the mean CIMT at the far wall of both left and right common carotid arteries.

Results
EFT was significantly higher in PE patients compared to the controls (5.11±1.69mm vs. 4.03±1.24mm; p<0.01 respectively). On the other hand there was no significant difference in CIMT between the groups (0.51±0.17mm vs. 0.47±0.12 mm; p=0.054). Groups were similar regarding age and other cardiovascular risk factors.

Conclusion
Maternal EFT was increased in women with GHT, whereas CIMT showed no significant difference between the groups. Non invasive measurement of EFT, which is an independent predictor of CVD, could be useful to indicate the risk of CVD in these patients.