

filling pressures (2). These parameters should be included in this study for a better assessment. Again, for the assessment of left ventricular diastolic dysfunction, a comparison between P-wave dispersion and TDI parameters would be more accurate.

Daytime ambulatory blood pressure (ABP) is usually higher than nighttime ABP, and the reverse diurnal pattern is independently associated with a higher incidence of cardiovascular events and mortality (4). Reverse-dippers still had approximately twice the risk for stroke versus dippers or non-dippers. Reverse-dippers also had twice as many total cardiovascular events (cardiac and stroke events) as the other dipping groups (5). On the other hand, as you evaluate dipper and non-dipper patient groups, it would be better to include reverse-dipper patients in the study, as this subgroup has the worst prognosis in hypertension patients.

**Ahmet Göktuğ Ertem, Mehmet Erdoğan, Telat Keleş<sup>1</sup>, Tahir Durmaz<sup>1</sup>, Engin Bozkurt<sup>1</sup>**

**Department of Cardiology, Atatürk Training and Education Hospital; Ankara-Turkey**

**<sup>1</sup>Department of Cardiology, Yıldırım Beyazıt University; Ankara-Turkey**

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**Address for Correspondence:** Dr. Ahmet Göktuğ Ertem,

Atatürk Eğitim ve Araştırma Hastanesi,  
Kardiyoloji, Bilkent Yolu 3. Km. Ankara-*Türkiye*

Phone: +90 312 291 25 25

E-mail: agertem@hotmail.com

**Available Online Date:** 25.12.2014

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DOI:10.5152/akd.2014.5748



## Author's Reply

To the Editor,

We thank all of the authors for their valuable comments, and we were delighted to see your interest to our study (1), entitled "Association of P-wave dispersion and left ventricular diastolic dysfunction in non-dipper and dipper hypertensive patients," published in the April issue of *The Anatolian Journal of Cardiology* 2014; 14: 251-5.

- 1) You are right about the mentioned parameters, such as  $e'$ ,  $a'$ , and  $E/e'$ ; this may be a deficiency of our study. Nevertheless, we will take your advice into consideration for future research.

- 2) Deficient of normal fall of blood pressure at night is associated with increased risk of cardiovascular disease (2). Reverse-dipper or riser patients generate a small portion of hypertensive patients (3). Although this group is at risk for stroke (commonly intracranial hemorrhage), especially in elderly patients (4). However, despite the evidences, reverse-dipping is not mentioned in the valid guide- lines currently (5). The small number of patients was another deficiency in our study to obtain wide-angle data. Consequently, we did not examine and create a reverse-dipper group. Studies involving more patients with longer follow-ups may contribute valuable parts of further guidelines.

**Oğuz Akkuş**

**Department of Cardiology, Van Education and Research Hospital; Van-Turkey**

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**Address for Correspondence:** Dr. Oğuz Akkuş,

Van Eğitim ve Araştırma Hastanesi, Kardiyoloji Kliniği, Van-*Türkiye*

Phone: +90 326 456 21 42

E-mail: oakkusfb@gmail.com

**Available Online Date:** 25.12.2014

## Breast arterial calcifications and carotid intima-media thickness and hemodynamics: Is there any association?

To the Editor,

We have read the article "Breast arterial calcifications and carotid intima-media thickness and hemodynamics: Is there any association?" written by Büyükkaya et al. (1), published in the June 2014 issue of *The Anatolian Journal of Cardiology*, with great interest.

They aimed to investigate the relation between breast arterial calcification (BAC) detected by mammography and two well-known markers of cardiovascular diseases: carotid artery intima-media thickness (C-IMT) and hemodynamic parameters, like carotid peak-systolic velocity (PSV), end-diastolic velocity (EDV), and resistive index (RI). Postmenopausal female patients ranging in age from 40 to 86 were included in their study. They found a statistically significant difference between BAC groups [BAC(+), BAC(-)] in mean C-IMT after adjustments

for age ( $0.81 \pm 0.2$  mm vs.  $0.69 \pm 0.2$  mm;  $p < 0.001$ ). No significant differences were observed between BAC (+) and BAC (-) groups in terms of PSV, EDV, and RI.

Hormone replacement therapy (HRT) is commonly used in menopausal women for several reasons, and it has a number of useful effects. A high plasma level of estrogen protects women against arteriosclerosis in the premenopausal period. Numerous biological effects of estrogens are consistent with atheroprotection. Estrogens decrease total and LDL cholesterol and lipoprotein A and increase HDL cholesterol. Moreover, they inhibit lipoprotein oxidation and arterial smooth muscle cell proliferation and have favorable effects of soluble markers of vascular inflammation, vascular stiffness, and endothelium-dependent vasodilatation. In association with the true mechanism of the protective effect of HRT on atherosclerosis, epidemiological studies have shown that HRT use was associated with a lower risk of coronary heart disease among postmenopausal women (2). A recent study has shown that HRT is associated with a lower level of intima-media thickness in the common carotid arteries and a lower prevalence of carotid atherosclerotic plaques (3). Cox et al. (4) observed that the BAC frequency was significantly decreased among HRT-using women more than in the non-HRT group. The frequency of BAC was significantly reduced with HRT usage for all age groups ( $p < 0.01$ ).

The studies above indicated that using HRT in the postmenopausal period affects both C-IMT and BAC. Büyükkaya et al. (1), in this report, compared the postmenopausal period between the two groups, but they did not mention whether they used HRT or not and also did not state the distribution of HRT usage between the two groups. We think that using HRT may have a role in the etiopathogenesis of BAC and C-IMT in postmenopausal women. We wonder about the authors' thoughts on this subject.

**Zeki Yüksel Günaydın, Ali Bekir Kurt<sup>1</sup>, Gönül Zeren<sup>2</sup>**

**Department of Cardiology, Faculty of Medicine, Ordu University; Ordu-Turkey**

<sup>1</sup>Department of Radiology, Ordu University; Ordu-Turkey

<sup>2</sup>Department of Cardiology, Ordu State Hospital; Ordu-Turkey

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**Address for Correspondence:** Dr. Zeki Yüksel Günaydın, Ordu Üniversitesi Tıp Fakültesi, Kardiyoloji Anabilim Dalı, 52100, Ordu- Türkiye

Phone: +90 452 223 52 52

E-mail: doktorzeki28@gmail.com

**Available Online Date:** 25.12.2014

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DOI: 10.5152/akd.2014.5800



## Author's Reply

To the Editor,

We thank the authors for their valuable comments on our study entitled, "Breast arterial calcifications (BAC) and carotid intima-media thickness and hemodynamics: Is there any association?" published in *Anatolian J Cardiol* 2014; 14: 378-82 (1).

First, patients using diuretics, hormone replacement therapy (HRT), and steroids and those under treatment for osteoporosis were excluded in our study.

In our study, the average postmenopausal period was found to be  $13.38 \pm 1.06$  and  $10.2 \pm 1.01$  years in the BAC (+) and BAC (-) groups, respectively. Since, in our study, a significant relation was found between age and BAC. This result was concordant with previous literature findings. The differences between the BAC (+) and (-) groups with regard to postmenopausal period were significant after excluding the effects of age. However, no significant correlation was found between postmenopausal period and the presence of BAC. This led us to infer that the real cause of BAC in patients with a longer postmenopausal period was the advancing age of the patient, not the length of the postmenopausal period.

The results of observational studies, which last up to 10 years, suggest that postmenopausal HRT protects women from cardiovascular events and decreases the risk of coronary artery disease by 35%-50%. However, the data of observational studies have not been confirmed by recent randomized studies; so, this subject is still controversial in the literature (2). As a result of our study, we think that BAC is not directly associated with the atherosclerotic process. While the evidence of the effect of HRT on atherosclerosis is controversial, we approach the theory that HRT decreases BAC with suspicion, as we do not consider it an atherosclerotic process.

**Ramazan Büyükkaya, Ayla Büyükkaya<sup>1</sup>, Ayşegül Altunbaş<sup>2</sup>,**

**Beyhan Öztürk**

**Department of Radiology, Faculty of Medicine, Düzce University; Düzce-Turkey**

<sup>1</sup>Department of Radiology, Düzce Atatürk State Hospital; Düzce-Turkey

<sup>2</sup>Department of Radiology, Tokat State Hospital; Tokat-Turkey

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**Address for Correspondence:** Dr. Ramazan Büyükkaya, Düzce Üniversitesi Tıp Fakültesi, Konuralp, Düzce- Türkiye

Phone: +90 380 541 13 90

Fax: +90 380 541 13 87

E-mail: rbuyukkaya@gmail.com

**Available Online Date:** 25.12.2014

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