

[ LETTERS TO THE EDITOR ]

**Associated Factors with Left Atrial Enlargement in Patients with Acute Ischemic Stroke**

**Key words:** ischemic stroke, brain natriuretic peptide, D-dimer

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*To the Editor* We greatly enjoyed reading the recently published article by Kim et al. (1). The authors found that the serum D-dimer levels were significantly associated with left atrial enlargement in anticoagulation-naïve patients with acute ischemic stroke and non-valvular atrial fibrillation. A number of studies have indicated the role of D-dimer in the stroke diagnosis, progression, and mortality (2, 3). Plasma D-dimer levels, due to their good correlation with the prognosis of acute stroke according to previous studies and their early and easy availability, have been shown to be a good candidate biomarker for the prognosis of acute stroke (2, 3). Brain natriuretic peptide (BNP) is also frequently elevated after an acute stroke and has been shown to be an independent predictor of mortality and a biological marker for distinguishing cardioembolic stroke from other stroke subtypes (4). Tamura et al. suggested that elevated plasma BNP concentrations may be a reliable surrogate marker for the prediction of left atrial appendage dysfunction and cardio-genic stroke in patients with acute ischemic stroke (5). Rost et al. also showed that elevated BNP was associated with a lower ejection fraction and left atrial dilatation in patients with acute ischemic stroke (6). We would therefore be grateful if the authors would provide the data for BNP levels on admission and their relationship with the serum D-dimer levels in patients with acute ischemic stroke.

The authors state that they have no Conflict of Interest (COI).

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**References**

1. Kim TW, Song IU, Chung SW, Kim JS, Koo J, Lee KS. Serum D-dimer levels are proportionally associated with left atrial enlargement in patients with an acute ischemic stroke due to non-valvular atrial fibrillation. *Intern Med* **55**: 1447-1452, 2016.
2. Wang J, Ning R, Wang Y. Plasma D-dimer level, the promising prognostic biomarker for the acute cerebral infarction patients. *J Stroke Cerebrovasc Dis* **25**: 2011-2015, 2016.
3. Hsu PJ, Chen CH, Yeh SJ, Tsai LK, Tang SC, Jeng JS. High plasma D-dimer indicates unfavorable outcome of acute ischemic stroke patients receiving intravenous thrombolysis. *Cerebrovasc Dis* **42**: 117-121, 2016.
4. Biteker M, Özden T, Dayan A, Tekkeşin Aİ, Mısırlı CH. Aortic stiffness and plasma brain natriuretic peptide predicts mortality in acute ischemic stroke. *Int J Stroke* **10**: 679-685, 2015.
5. Tamura H, Watanabe T, Nishiyama S, et al. Elevated plasma brain natriuretic peptide levels predict left atrial appendage dysfunction in patients with acute ischemic stroke. *J Cardiol* **60**: 126-132, 2012.
6. Rost NS, Biffi A, Cloonan L, et al. Brain natriuretic peptide predicts functional outcome in ischemic stroke. *Stroke* **43**: 441-445, 2012.

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