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Comment on "High BNP level as risk factor for acute kidney injury and predictor of all-cause mortality in STEMI patients"

Comment On

Akgul O, Uyarel H, Pusuroglu H et al (2013) High BNP level as risk factor for acute kidney injury and predictor of all-cause mortality in STEMI patients. Herz. doi:10.1007/s00059-013-3853-8

To the Editor

We read the article, "High BNP level as risk factor for acute kidney injury and predictor of all-cause mortality in STEMI patients," by Akgul et al. [1].

The authors have concluded that a high-admission BNP level is associated with an increased risk of AKI development in patients with STEMI undergoing primary PCI.

We know that acute kidney injury (AKİ) may occur after PCI. A cause of acute kidney injury is contrast-induced nephropathy (CIN) after PCI. CIN is an iatrogenic disorder, resulting from the administration of contrast media. Although rare in the general population, CIN occurs frequently in patients with underlying renal dysfunction, diabetes, anemia, and the elderly. These risk factors are synergistic in their ability to predispose to the development of CIN. To assess the cumulative risk of several variables on renal function, a simple CIN risk score that can be readily applied was developed [2].

Thus, the study population could be divided not only according to BNP level, but also according to CIN risk score, and the effect of BNP level on the risk of AKI development in patients with STEMI undergoing primary PCI could be clearer.

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Reply

Our study was conducted with STEMI patients who underwent primary PCI and these patients were not in a stable condition. As it is very well known, the cut-off value of the BNP level has been determined only for acute heart failure to date [3]. In our study using the admission BNP level (>88.7 pg/ml), we have shown that BNP is an independent predictor of 6-month mortality and also of AKI development (see Tab. 4 and Tab. 3 in the original article, respectively)

We also found that a specific cut-off point for admission BNP of 42.4 pg/ml had the best predictive value for AKI and yielded a sensitivity of 60.0% and a specificity of 61.1% (see Fig. 3 in the original article).

There is a need for further studies to better understand the predictive value of BNP.

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