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Reply

To the Editor:

We thank Drs Tutarel and Kielstein [1] for their interesting remark concerning symmetrical dimethylarginine (SDMA) as a possible biomarker for the detection of acute kidney injury (AKI) after cardiac surgery. Postoperative AKI is certainly a vexing complication of cardiac surgery, increasing mortality and morbidity, predisposing patients to a longer hospitalization, and requiring additional treatments [2]. Numerous studies have attempted to determine AKI pathophysiology, and several preventive AKI strategies have been proposed along with clinical and experimental studies suggesting that to achieve beneficial effects, therapies to AKI severity need to be applied either before or soon after renal injury [2]. Delayed AKI recognition inevitably increases morbidity and mortality [2]. Therefore, the identification of early and reliable AKI biomarkers is crucial [2]. Discerning AKI etiologies, predicting the AKI severity, monitoring the course of AKI, and the response to AKI interventions are all essential features for a reliable AKI biomarker [2].

Symmetrical dimethylarginine is the structural isomer of the asymmetric dimethylarginine, which has been reported as independent risk factor for mortality in critically ill patients and a marker of progression of various chronic renal diseases [3–5]. Although plasma SDMA seems to correlate with established estimates of glomerular filtration rate, at the moment, no data exist on its correlation with AKI after cardiac surgery or for detecting it [5]. Available information refers to comparison of inflammatory and oxidative stress after different types of cardiac surgery only [6–8].

We agree with Drs Tutarel and Kielstein [1] in considering SDMA as a possible promising biomarker, but up to now, its several lacks do not make it an early and recognized biomarker for AKI after cardiac surgery. We hope that upcoming clinical studies can definitively clarify SDMA usefulness in the cardiac surgery setting.

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