Rapid Diagnosis of acute kidney injury (AKI) associated with cardiac surgery, using the liver type fatty acid binding protein (L-FABP) biomarker.

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Abstract

Background and objectives: cardiac surgery is often associated with acute kidney injury (AKI). Nowadays, AKI is typically diagnosed by an increase in serum creatinine, which is a delayed and unreliable biomarker. Recent studies recommended using the liver type fatty acid binding protein (L-FABP) as an early biomarker.

Material and Methods: The urine samples of 18 adult patients undergoing cardiac surgery were collected in different times before (2, 4,8,24 hour) and after cardiac surgery for detection of L-FABP by Elisa.

Results: The results from ELISA test show that the increasing amount of L-FABP in urine samples of 4 patients is a diagnostic indicator for AKI. The mean concentration of L-FABP has increased up to 17 times at 8 hours after cardiac surgery compared to before surgery.

Conclusion: according to our findings, we speculated that the urinary L-FABP can be a reliable and rapid biomarker for diagnosis of acute kidney injury.

Key words: Acute Kidney Injury, Liver type Fatty Acid Binding Protein, Cardiac surgery