

Topic	<p>”Caring Acute Kidney Injury: The Renaissance of AKI ” JSDT-Can kidney biomarkers help timely interventions and prognostication?</p>
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<p>Since the 2000s, acute kidney injury (AKI) is recognized as high risk status of death even at an early stage. AKI is diagnosed by biomarkers such as serum creatinine and urine volume. However, the rise of the Cr values is known to be delayed than the decrease in actual renal function. In order to prevent and treat AKI at the stage when it is still reversible, there is need for more adequate parameters than Cr that would allow early diagnosis of AKI. Now, several biomarkers have been reported to be useful for early diagnosis of AKI.</p> <p>In the Japanese AKI guideline 2016, urinary neutrophil gelatinase-associated lipocalin (NGAL) and liver-type fatty acid-binding protein (L-FABP) were suggested to measure for the early diagnosis of AKI. Similarly, the urinary NGAL was also recommended to predict the severity and mortality of AKI than urinary FABP and cystatin C. Other than these biomarkers, several new markers are reported to be useful in clinical settings.</p> <p>The main therapeutic and preventive intervention for AKI is usually supportive care. In KDIGO 2012 Clinical Practice Guideline for AKI, the information on multidisciplinary management of AKI has been reported. KDIGO bundle consisting of optimization of volume status and hemodynamics, avoidance of nephrotoxic drugs, and preventing hyperglycemia. Recently, the usefulness of the tissue inhibitor of metalloprotease-2 (TIMP-2) and the insulin-like growth factor-binding protein 7 (IGFBP7) were reported in predicting cardiac surgery associated AKI. In high risk patients predicted by urinary [TIMP-1]*[IGFBP7] , KDIGO bundle reduced onset of AKI, significantly. These results indicate that AKI biomarkers may suggest the need for AKI preventive treatment and have a prognostic improvement effect in high risk patient with cardiac surgery.</p> <p>AKI can occur for a variety of reasons. Therefore, early diagnosis markers may differ depending on the cause of AKI. In this presentation, the usefulness and challenges of biomarkers in AKI treatment will be summarize.</p>	