KSN 2018
Seoul, Korea · May 17 - 20

Abstract Type : Poster
Presentation No. : PGN 003

Outcomes and possible mechanism of acute tubulointerstitial nephritis

Dong Hwan Yun, Min Woo Kang, Min Jung Kang, Soie Kown, Jung Nam An, Dong Ki Kim, Yon Su Kim, Jung Pyo Lee, Ho Jun Chin, Seung Seok Han
Department of Internal Medicine-Nephrology, Seoul National University Hospital, Korea, Republic of

Objectives: Acute tubulointerstitial nephritis (ATIN) is an important cause of acute kidney injury, but its outcomes and underlying mechanisms remain unresolved.

Methods: A total of 75 patients who had biopsy-proven ATIN but did not have primary glomerulonephritis were retrospectively reviewed between 2001 and 2017 from two tertiary referral centers. As a primary outcome, renal recovery was defined as a decline ≥50% of peak creatinine or ≤1.4 mg/dL of subsequent creatinine. Additionally, the risk of end-stage renal disease (ESRD) was tacked after biopsy. Plasma and urine inflammatory cytokines at the time of biopsy were analyzed using a multi-analyte flow assay kit (n=34).

Results: 70 cases (93.3%) were idiopathic ATIN; others were related with autoimmune diseases. At 6 months post-biopsy, 69% of patients achieved renal recovery and 12% of patients needed renal replacement therapy. During the median follow-up period of 3 years (maximum 19 years), the groups with diabetes mellitus, chronic kidney disease, and needing dialysis at the time of diagnosis had a higher risk of low renal recovery and ESRD than the counterpart groups. However, steroid use did not affect the alteration of these outcomes. Among several inflammatory cytokines, monocyte chemotactic protein 1 and interleukin-8 levels were markedly elevated in both plasma and urine; and interleukin-18 levels were high in plasma alone.

Conclusions: Baseline kidney status, not current therapeutic approach, affects the outcomes of ATIN. The present cytokine results will be helpful to develop a novel targeting therapy for ATIN.