KSN 2020
FULLY VIRTUAL MEETING

Abstract Type : Oral
Abstract Submission No. : OR-1093

The efficacy of serum galactose-deficient IgA1 for the early detection of recurrent IgA nephropathy in kidney transplant recipients

Woo-yeong Park, Ohyun Kwon, Yaerim Kim, Jin Hyuk Paek, Kyubok Jin, Seungyeup Han
Department of Department of Internal Medicine, Keimyung University School of Medicine, Keimyung University Kidney Institute, Korea, Republic of

Objectives: Recurrent IgA nephropathy (IgAN) is the most frequent cause of renal graft loss among recurrent glomerulonephritis. It is known that the galactose-deficient IgA1 (Gd-IgA1) is the main role in the pathophysiology of IgAN, but the association between Gd-IgA1 and the occurrence of recurrent IgAN in kidney transplant recipients (KTRs) is uncertain.

Methods: We enrolled 27 KTRs with stored samples in the biobank among the patients who performed allograft biopsies between 2009 and 2016, and measured serum Gd-IgA1 level. The patients were divided into two groups: group 1; patients who did not show recurrence of IgAN in patients with IgAN prior KT (non-recurrent IgAN patients, n=14), group 2; patients who were diagnosed to recurrent IgAN in patients with IgAN prior KT (recurrent IgAN patients, n=13). We evaluated the clinical characteristics, graft and patient survivals.

Results: There were no significant differences in mean age at KT, the rate of female gender between the two groups. The 10-year graft survival rates were 69.6% in group 1 and 88.9 % in group 2, and patient survival rates were 92.9% in group 1 and 100% in group 2, respectively. Mean serum Gd-IgA1 levels were significantly higher in the group 2 compared to those in the group 1 (6,418 ± 3,675 ng/mL vs. 3,381 ± 2,844 ng/mL, P=0.024). Cut off value of serum Gd-IgA1 in the ROC curve analysis was 4,338 ng/mL (AUC=0.76, 95% C.I. 0.57–0.95, P=0.023). Sensitivity was 76.9% and specificity was 78.6%. Mean time between kidney transplantation (KT) and allograft biopsies tended to be longer in the group 2 compared to that in the group 1 (109 ± 83 months vs. 62 ± 69 months). Serum Gd-IgA1 level was an independent factor for diagnosis of recurrent IgAN (OR 21.63, 95% C.I. 2.08-225.27, P=0.046).

Conclusions: Serum Gd-IgA1 might be effective for early detection of recurrent IgAN in KTRs.