Serum Levels of Lipoprotein (a) after Renal Transplantation: Short-term Follow-Up

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Fig. 1. Serum levels of Lp(a) in controls, before and after RT. *p = 0.00004, **p = 0.01, compared to controls. – = Median.

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Dear Sir,

Lipoprotein (a) [Lp(a)] is an independent risk factor of atherosclerotic vascular disease [1]. Although it has been known that Lp(a) levels in chronic renal failure undergoing hemodialysis were elevated compared to normal controls [2], the precise mechanism is unclear. Therefore, this study was undertaken to see whether improved uremic condition or renal function after renal transplantation (RT) will decrease serum Lp(a) levels in renal transplant recipients.

The study group consisted of chronically hemodialyzed patients, 16 males and 14 females, aged between 24 and 45 years (mean 34). Healthy controls were blood bank donors, 13 males and 17 females aged between 26 and 42 years (mean 39). All renal transplant recipients took cyclosporine and prednisonone as scheduled and showed no episodes of acute rejection during the follow-up period. Serum samples were collected from the patients before and after RT (1 week, 4 weeks and 6 months) and were stored at -70°C until the study was performed. Lp(a) levels were measured using an ELISA assay. For this purpose, we used a commercially available assay (Immuno GmbH Co.). This test kit is based on a well coated with monospecific, polyclonal antiapolipoprotein (a) antibody, and conjugates consisted of second monospecific antiantapolipoprotein (a) antibodies and peroxidase. All samples were read with
the spectrophotometer at 450 nm. Statistical analyses were performed by the Friedman and Wilcoxon signed-rank test.
In our study, Lp(a) levels in patients before RT (mean value 25.5 ± 19.2 mg/dl) were significantly higher than those of controls (mean value 9.6 ± 6.1). One week after RT, serum Lp(a) levels (mean value 16.1 ± 12.5) decreased significantly, but thereafter, there were no significant changes of serum Lp(a) levels (fig. 1).
So, we conclude that, after RT, improved uremic condition and renal function may be associated with decline of the serum Lp(a) level. However, more long-term studies are needed to define the role of Lp(a) in the pathogenesis of atherosclerotic vascular changes in renal transplant recipients.