

신장이식 후 갑상선기능의 변화가 신이식의 예후에 미치는 영향에 대한 분석연구

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The Effects of Thyroid Function on Clinical Outcomes after Kidney Transplantation

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Introduction: The abnormalities in thyroid function, especially triiodothyronine (T3) levels, are observed in patients with chronic kidney disease and end stage renal disease. Few previous studies evaluated the correlation between thyroid function after kidney transplantation and various clinical outcomes, in particular, in Asian patients.

Methods: During the period of January 1997 to January 2012, the data about a total of 400 kidney transplantation recipient patients who had thyroid function test (TFT) measured within 5 years after kidney transplantation was analyzed through the retrospective review of electronic medical records of two medical centers.

Results: Posttransplant thyroid-stimulating hormone (TSH) level was 1.94 ± 4.23 μ U/mL, free thyroxin (fT4) level was 1.31 ± 0.39 ng/dL, and T3 level was 112.38 ± 34.06 ng/mL. After follow up duration of 84.1 ± 55.4 months and 77.3 ± 53.0 months, 20 patients (5.0%) were died, and 41 patients (10.3%) were diagnosed allograft failure, respectively. In cox-regression analysis model, posttransplant T3 level was negatively correlated with graft failure (hazard ratio [HR] 0.98; 95% confidence interval [CI] 0.97-0.99; $p=0.001$), however, posttransplant TSH and fT4 level were not associated. Divided to four groups of T3 level, the risk for development of graft failure was the highest in the lowest group of T3 level (HR 6.90; 95% CI 1.45-32.85; $p=0.015$). After adjusting other risk factors for graft failure, post-transplant T3 level was significantly associated with kidney allograft failure. In Kaplan-Meier curves, in patients with lower T3 level had the higher risk for allograft failure (Log Rank p -value 0.037).

Conclusions: Triiodothyronine (T3) level measured after kidney transplantation is an independent risk factor for allograft failure. Regular measurement and monitoring of TFT can be considered as a crucial marker for prognosis in renal transplant recipient patients.

Key Words: 신장이식, 갑상선기능

Kidney transplantation, Thyroid function