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## 신장 이식 후의 갑상선 기능이 예후에 미치는 영향

서울특별시보라매병원 신장내과<sup>1</sup>, 서울대병원 신장내과<sup>2</sup>, 중앙대학교병원 신장내과<sup>3</sup>  
분당서울대병원 신장내과<sup>4</sup>, 아산병원 외과<sup>5</sup>, 아산병원 신장내과<sup>6</sup>, 서울대병원 장기이식센터<sup>7</sup>

안정남<sup>1</sup>, 황진호<sup>3</sup>, 이선화<sup>2</sup>, 김세중<sup>4</sup>, 김영훈<sup>5</sup>, 오윤규<sup>1</sup>, 한덕종<sup>5</sup>  
박수길<sup>6</sup>, 임춘수<sup>1</sup>, 안규리<sup>7</sup>, 김연수<sup>2</sup>, 이정표<sup>1</sup>

### The Effects of Thyroid Function on Clinical Outcomes after Kidney Transplantation

Jung Nam An<sup>1</sup>, Jin Ho Hwang<sup>3</sup>, Sunhwa Lee<sup>2</sup>, Sejoong Kim<sup>4</sup>, Young Hoon Kim<sup>5</sup>, Yun Kyu Oh<sup>1</sup>  
Duck-Jong Han<sup>5</sup>, Su-Kil Park<sup>6</sup>, Chun Soo Lim<sup>1</sup>, Curie Ahn<sup>7</sup>, Yon Su Kim<sup>2</sup>, Jung Pyo Lee<sup>1</sup>

Department of Internal Medicine<sup>1</sup>, Seoul National University Boramae Medical Center  
Department of Internal Medicine<sup>2</sup>, Seoul National University Hospital  
Department of Internal Medicine<sup>3</sup>, Chung-Ang University Hospital  
Department of Internal Medicine<sup>4</sup>, Seoul National University Bundang Hospital  
Department of Surgery<sup>5</sup>, Asan Medical Center and University of Ulsan College of Medicine  
Department of Internal Medicine<sup>6</sup>, Asan Medical Center and University of Ulsan College of Medicine  
Transplantation Center<sup>7</sup>, Seoul National University Hospital

**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 transplant recipients who had thyroid function test 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  $1.9 \pm 4.2$   $\mu$ U/mL, free thyroxin (fT4) level was  $1.3 \pm 0.4$  ng/dL, and T3 level was  $112.4 \pm 34.1$  ng/dL. After follow up duration of  $77.3 \pm 53.0$  months, 41 patients (10.3%) were diagnosed allograft failure. In Cox-regression analysis model, posttransplant T3 level was negatively correlated with graft failure (HR 0.98; 95% CI 0.97-0.99; p=0.001), however, post-transplant TSH and fT4 level were not associated. Divided to tertiles of T3 level, the risk for development of graft failure was the highest in the lowest group of T3 level (HR 6.25; 95% CI 1.74-22.44; p=0.005). After adjusting other risk factors for graft failure, posttransplant T3 level was also 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=0.002).

**Conclusions:** Triiodothyronine level measured after kidney transplantation is an independent risk factor for allograft failure. Regular measurement and monitoring of thyroid function should be the critical focus of post-transplant care.

**Key Words:** 신장이식, 갑상선 기능, 임상적 예후

Kidney transplantation, Thyroid function, Clinical outcome