

## 잔여신기능에 따른 주2회와 주3회 혈액투석의 비교

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### Twice-Weekly Versus Thrice-Weekly Hemodialysis in Patients with or without Residual Kidney Function

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**Background:** Residual kidney function (RKF) accounts for large solute removal and significantly contributes to survival benefits in hemodialysis (HD) patients. However, there are no reliable outcome data suggesting that the frequency of HD might be safely reduced in patients with substantial RKF.

**Methods:** A total of 685 patients receiving more than 3 months HD therapy were included from the Clinical Research Center registry for end-stage renal disease. The presence of RKF was defined as more than 100 ml/day of urine volume, and patients were classified into twice-weekly HD with RKF (n=113), thrice-weekly HD with RKF (n=137) and thrice-weekly HD without RKF (n=435). The primary and secondary outcome was 3-year mortality and hospitalization for cardiovascular events (CVE), respectively.

**Results:** The baseline RKF was significantly higher in twice-weekly HD patients with RKF than in thrice-weekly HD patients with RKF (10.2±23.9 RKF ml/min/1.73m<sup>2</sup>BSA vs. 4.4±14.5 ml/min/1.73m<sup>2</sup>BSA; p=0.034), and it remained higher at 12 months follow-up. The renal Kt/V showed similar pattern between twice-weekly and thrice-weekly HD patients with RKF, and delivered single-pool Kt/V was not different between three groups. The thrice-weekly HD patients with RKF showed significantly higher survival rate than twice-weekly HD patients with RKF or thrice-weekly HD patients without RKF (p=0.002). In multivariable analyses, compared with thrice-weekly HD patients without RKF, thrice-weekly HD patients with RKF were associated with lower risk for all-cause mortality (hazard ratio 0.11; 95% CI 0.02-0.53). However, twice-weekly HD treatment with RKF did not reduce the risk of mortality (HR 0.65; 95% CI 0.22-1.87). For hospitalization of CVE, thrice-weekly HD therapy with RKF was independently associated with lower risk, (HR 0.40; 95% CI 0.16-0.98), but twice-weekly HD patients with RKF were not associated (HR 0.80; 95% CI 0.38-1.71).

**Conclusions:** Twice-weekly HD patients with RKF have similar outcome compared to thrice-weekly HD patients without RKF. However, thrice-weekly HD patients with RKF were more advantageous for mortality and CVE than those without RKF.

**Key Words:** 혈액투석, 잔여신기능, 사망률  
Hemodialysis, Residual kidney function, Mortality