

中文題目：Kt/V 小於 1.4 的血液透析病人有較差的存活率，特別是體重較重的病人：一個 15 年的觀察性研究

英文題目：Kt/V less than 1.4 is associated with worse survival in incident hemodialysis patients, especially in those with body weight above average, in Taiwan after follow-up for 15 years

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**Background:** Higher dialysis adequacy presented as Kt/V is associated with lower all-cause mortality in observational studies in incident hemodialysis patients, though randomized HEMO study showed no superior survival of higher target Kt/V group patients (Kt/V 1.65 vs Kt/V 1.25). In observational studies, patients with lower body weight tend to achieve higher Kt/V, which might bias the results. Thus, we would ask whether higher Kt/V with the dose more than that in HEMO study would be associated better survival for hemodialysis patients stratified by body weight after long term follow-up.

**Methods:** We studied 2615 incident hemodialysis patients in Kaohsiung Medical University Hospital and associated dialysis clinics from 1995.1.1 to 2009.12.31. Laboratory data were collected between 4th to 9th months and averaged. Chi-square test, ANOVA, linear regression and multivariate cox regression analysis were carried out and p value less than 0.05 was considered as significant.

**Results:** The average age at dialysis was 59±14.2 years old and 50.7% were female, mean follow up days were 1844.7 days and 1113 (40.2%) mortalities in 15 years. The average dialysis dose was single pool Kt/V (Daugirdas) 1.6 ± 0.3. We divided the patients to 4 groups as Kt/V <1.2, 1.2~1.4, 1.4~1.7 and >1.7 and found different mortality rates 51.2%, 41.4%, 39.1%, and 37.1%, respectively. Kt/V was positively associated nutritional markers (albumin, hemoglobin and nPCR) and negatively associated with body weight and the presence of diabetes and congestive heart failure. with In multivariate cox regression models for all cause mortality, it showed that hazard ratio (HR) of lower Kt/V group (Kt/V <1.2 and Kt/V 1.2~1.4) compared to Kt/V >1.7 group were 1.71 (1.35~2.16) and 1.23 (1.00~1.51), respectively. In subgroup analysis, patients with above average body weight and lower Kt/V (Kt/V <1.2 and Kt/V 1.2~1.4), compared to Kt/V >1.7 group, had HR 2.73 (1.87-3.98) and 1.47 (1.04-2.06), respectively. On the other hand, patients with below average body weight and lower Kt/V (Kt/V <1.2 and Kt/V 1.2~1.4 had HR 1.17 (0.83-1.64) and 1.27 (0.97-1.67), respectively.

**Conclusion:** Kt/V <1.4 was associated with higher risk for mortality in incident hemodialysis patients, especially for those body weight above average after 15 years of follow-up. Large and long term randomized trial in Asia is needed to confirm its benefit.