

## **To investigate the impact of vascular access flow (Qa) on vascular and all-cause mortality in chronic haemodialysis (HD) patients” Wuet al (2017).**

Abstract:

**OBJECTIVES:** To investigate the impact of vascular access flow (Qa) on vascular and all-cause mortality in chronic haemodialysis (HD) patients.

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**DESIGN:** Observational cohort study.

**SETTING:** Single centre.

**PARTICIPANTS:** Adult chronic HD patients at the HD unit of Shin Kong Wu Ho-Su Memorial Hospital between 1 January 2003 and 31 December 2003 were recruited. Patients were excluded if they had arteriovenous fistula or arteriovenous graft failure within 3 months before the date of Qa measurement, were aged <18 years and had Qa levels of  $\geq 2000$  mL/min. A total of 378 adult chronic HD patients were eventually enrolled for the study.

**INTERVENTIONS:** The selected patients were evaluated with Qa and cardiac index (CI). They were divided into four groups according to three Qa cut-off points (500, 1000 and 1500 mL/min).

**PRIMARY AND SECONDARY OUTCOME MEASURES:**

Short-term and long-term vascular (cardiovascular or cerebrovascular) and all-cause mortality.

**RESULTS:** Qa was positively correlated with CI ( $r=0.48$ ,  $p<0.001$ ). A Qa level of <1000 mL/min was independently associated with 1-year all-cause mortality (adjusted OR, 6.04; 95% CI 1.64 to 22.16;  $p=0.007$ ). Kaplan-Meier analysis revealed that the cumulative incidence rates of all-cause and vascular mortality were significantly higher in the patients with a Qa level of <1000 mL/min (log-rank test; all  $p<0.01$ ). Furthermore, a Qa level of

<1000 mL/min was independently associated with long-term all-cause mortality (adjusted HR, 1.62; 95% CI 1.11 to 2.37; p=0.013); however, the risk of vascular mortality did not significantly increase after adjustment for confounders.

CONCLUSIONS: Qa is moderately correlated with cardiac function, and a Qa level of <1000 mL/min is an independent risk factor for both short-term and long-term all-cause mortality in chronic HD patients.

Full Text

Reference:

Wu, C.K., Wu, C.L., Lin, C.H., Leu, J.G., Kor, C.T. and Tarng, D.C. (2017) Association of vascular access flow with short-term and long-term mortality in chronic haemodialysis patients: a retrospective cohort study. *BMJ Open*. 7(9), p.e017035.

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