



The advantage of arteriovenous fistulas (AVFs) in older patients requiring dialysis is controversial. We reviewed our vascular access experience in patients ≥ 70 years of age (older group) compared with younger patients” Hwang et al (2018).

Abstract:

OBJECTIVE: The advantage of arteriovenous fistulas (AVFs) in older patients requiring dialysis is controversial. We reviewed our vascular access experience in patients ≥ 70 years of age (older group) compared with younger patients.

METHODS: We analyzed consecutive patients who underwent access surgery between 2013 and 2016. Primary success (PS) and primary patency (PP) data were analyzed between the older and younger groups before and after propensity score matching of the patients’ characteristics and access composition. PS was defined as the achievement of access function that was amenable to two sessions of successful cannulation without early occlusion or maturation failure requiring revision. PP was defined as the time with uninterrupted patency without intervention.

RESULTS: A total of 594 consecutive accesses were created among 563 patients, of whom 119 were allocated into each group after propensity score matching. In the whole cohort, 193 accesses (32.5%) were performed in older patients. AVFs were performed in 130 (67.4%) older patients and 293 (73.1%) younger patients. Regarding AVFs, the PS rate (83.6% in the

older group vs 94.3% in the younger group; $P = .001$) and the overall PP at 6 and 12 months (73.1% and 57.1%, respectively, in the older group vs 86.7% and 77.7%, respectively, in the younger group; $P = .009$) were lower in the older group than in the younger group. However, no differences were found in the PS and PP rates for arteriovenous grafts between groups. Regarding the AVF location, the PS rate for forearm AVFs was significantly lower in the older group than in the younger group (76% vs 93%; $P < .001$); however, the PS rate of the upper arm was not different between the groups (94% vs 97%; $P = .425$). In the patients with PS, the PP rate of AVFs was similar between the two groups. In the older group with forearm AVFs, the median diameter of the radial artery was larger in the patients with PS than in the patients without PS (2.20 mm with PS vs 2.00 mm without PS; $P = .008$). The propensity score matching results demonstrated similar trends for the whole cohort, with lower PS ($P = .042$) and PP rates ($P = .023$) for AVF in the older group. **CONCLUSIONS:** The outcomes after AVF were poorer in the older group than in the younger group, which was primarily due to unsatisfactory outcomes in patients with forearm AVFs. Thus, stricter criteria, especially regarding the radial artery diameter, should be applied for forearm AVFs in older patients, and additional research is necessary to delineate the risk factors for primary failure.

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Reference:

Hwang, D., Park, S., Kim, H.K. and Huh, S. (2018) Comparative outcomes of vascular access in patients older than 70 years with end-stage renal disease. *Journal of Vascular Surgery*. October 24th. .

doi: 10.1016/j.jvs.2018.07.061.

