

CREATING NATIVE ARTERIOVENOUS FISTULA FOR HAEMODIALYSIS: FOREVER YOUNG

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INTRODUCTION AND AIM:

Creation of permanent vascular access in elderly patients who begin maintenance haemodialysis (HD) might be very difficult. The aim of the study was to compare native arteriovenous fistula (AVF) maturation outcome between elderly and younger patients.

Table 1. Clinical characteristics of the study population

	N (%)
No of patients	338 (100)
male	204 (59)
Age (65+)	135 (39)
Diabetes	82 (24)
Hypertension	258 (76)
comorbidity	70 (21)
CVK+	78 (23)

Table 2. Differences in continuous variables between young and

	No	Age (X±SD)	CoMb (Rank Sum)	HTA (Rank Sum)
Young (≤65)	203	74.2 ±5.8	24918	25072
Elderly (65+)	135	51.1± 5.7	32374	32220
p		<0.0001	0.001	0.001

Table 3. Differences in continuous variables between man and women

	CoMb (Rank Sum)	DM (Rank Sum)	HTA (Rank Sum)	AVF (Rank Sum)
male	36057	36185	36147	32934
female	21234	21106	21144	24357
p	0.016	0.014	0.015	0.0005

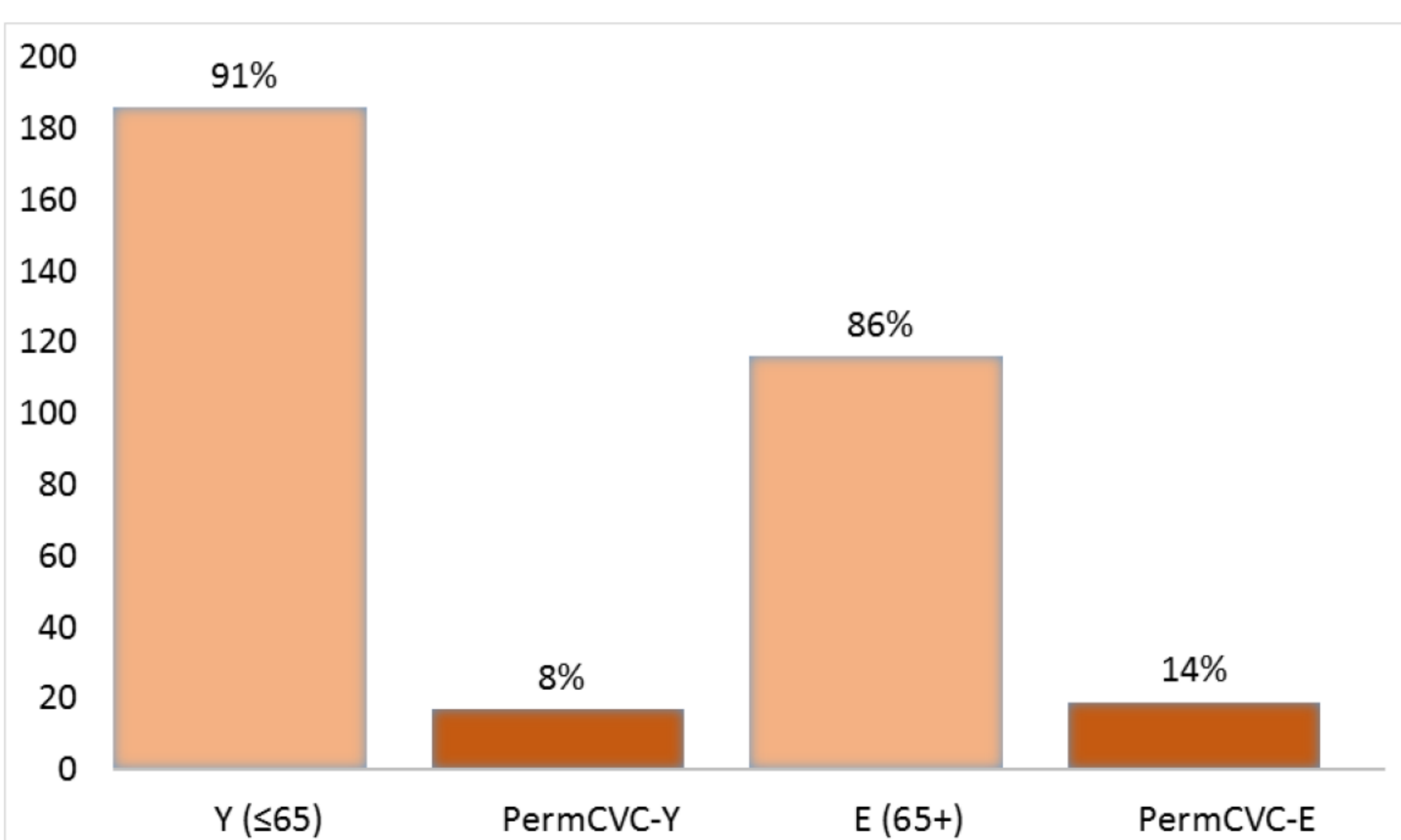


Figure 1. Vascular access in young and elderly patients

METHODS:

A prospective, observational, single center study compared maturation outcome of native AVF in 338 consecutive, incident patients during 5 years' period (2011– 2015) allocated in two groups: elderly (mean age 74.2 ±5.8, 66 to 90 years old, N=135) and younger (51.1± 5.7, 20 to 65 years old, N=203; p<0.0001). Preoperative Duplex ultrasound mapping was performed in all patients. We compared primary AVF patency and age, gender, frequencies of comorbidities, diabetes mellitus, hypertension, permanent catheter placement and peritoneal dialysis.

RESULTS:

Overall primary AVF creation rate was 89.3%, 9.7% out of patients had permanent catheter for HD, similarly frequent both in elderly (14%) and younger (8.3%) patients' groups (p=0.107). Only 3 patients were transferred to PD.

Men were borderline significant older than women (p=0.054). Primary AVF success was more frequent in men than women (p=0.0009). Men shown significant correlation between age and comorbidities (r²=0.283) and hypertension (r²=0.206), as well as women (r²=0.232; all p<0.05).

Comorbidity frequency was similar between elderly and younger patients (p=0.278), and it correlated significantly with age (r²=0.254), diabetes (r²=0.232) in younger patients' group, and hypertension (r²=0.176) in elderly patients' group (all p<0.05).

Age, comorbidities presence and hypertension were associated with less favorable for native AVF creation outcome in elderly, and diabetes in younger patients. Overall AVF success rate close to 90% and 86% in elderly patients, justifies AVF attempt in those patients on maintenance HD.

Table 4. Correlation between the variables examined in elderly and the radiocephalic arteriovenous fistula outcome

variable	gender	Diabetes	Attempt
Coefficient correlation	0.212	-0.169	-0.474

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variable	gender	HTA
Coefficient correlation	0.183	-0.190

CONCLUSION:

Age, comorbidities presence and hypertension were associated with less favorable for native AVF creation outcome in elderly, and diabetes in younger patients. Overall AVF success rate close to 90% and 86% in elderly patients, justifies AVF attempt in those patients on maintenance HD.