

Table 1 Baseline characteristics of 60 hemodialysis patients with atrial fibrillation and warfarin use

Baseline characteristics	Users (<i>n</i> = 28)	Non-users (<i>n</i> = 32)	<i>P</i> value
Age (years)	67.8 (9.4)	68.4 (8.5)	0.80
Male [<i>n</i> (%)]	16 (57)	23 (72)	0.28
Body mass index (kg/m ²)	20.7 (3.1)	20.6 (2.8)	0.90
Duration of dialysis (years)	15 (4, 30)	10 (3, 22)	0.33
Cause of end-stage kidney disease			0.61
Glomerulonephritis [<i>n</i> (%)]	16 (57)	17 (53)	
Diabetes [<i>n</i> (%)]	5 (18)	9 (28)	
Other [<i>n</i> (%)]	7 (25)	6 (19)	
Type of vascular access			1.00
Fistula [<i>n</i> (%)]	21 (75)	23 (72)	
Graft [<i>n</i> (%)]	6 (21)	8 (25)	
Superficial artery [<i>n</i> (%)]	0 (0)	1 (3)	
Unknown [<i>n</i> (%)]	1 (4)	0 (0)	
Medical history			
Ischemic stroke [<i>n</i> (%)]	4 (14)	8 (26)	0.34
Transient ischemic attack [<i>n</i> (%)]	0 (0)	3 (10)	0.24
Hemorrhagic stroke [<i>n</i> (%)]	1 (4)	0 (0)	0.47
Coronary artery bypass graft [<i>n</i> (%)]	2 (7)	1 (3)	0.59
Percutaneous coronary intervention [<i>n</i> (%)]	2 (7)	2 (6)	1.00
Malignancy [<i>n</i> (%)]	5 (18)	4 (13)	0.73
Medication			
Antiplatelet drug [<i>n</i> (%)]	17 (61)	15 (47)	0.31
Histamine-2 blocker or PPI [<i>n</i> (%)]	16 (60)	14 (44)	0.30
ESA [<i>n</i> (%)]	23 (81)	21 (66)	0.06
Anti-hypertensive drug [<i>n</i> (%)]	13 (46)	16 (50)	1.00
Comorbidities			
Diabetes mellitus [<i>n</i> (%)]	6 (21)	9 (28)	0.77
Predialysis systolic blood pressure (mmHg)	144 (26)	149 (23)	0.43
Predialysis diastolic blood pressure (mmHg)	76 (15)	83 (19)	0.14
Laboratory parameters			
Serum albumin (mg/dL)	3.8 (0.4)	3.8 (0.3)	0.58
Hemoglobin (g/dL)	10.4 (1.3)	10.7 (1.3)	0.47
Total cholesterol (mg/dL)	155 (34)	154 (29)	0.92

HDL-cholesterol (mg/dL)	52 (15)	43 (13)	0.02
Triglyceride (mg/dL)	87 (64, 123)	80 (62, 116)	0.90
HbA1c (%) ^a	5.2 (0.8)	7.3 (2.7)	0.09
PT INR	1.5 (0.4)	NA	NA
Single-pooled Kt/V	1.43 (0.60)	1.44 (0.37)	0.96
Ultrafiltration/hour (mL/hour)	660 (157)	637 (276)	0.69
Transport to dialysis facilities			1.00
Walk alone without a cane [<i>n</i> (%)]	19 (68)	22 (69)	
Walk alone with a cane [<i>n</i> (%)]	3 (11)	3 (9)	
Walk with support person [<i>n</i> (%)]	1 (4)	2 (6)	
Wheelchair [<i>n</i> (%)]	5 (18)	5 (16)	
Stretcher [<i>n</i> (%)]	0 (0)	0 (0)	
CHADS2 score ^b			0.72
1 [<i>n</i> (%)]	5 (19)	3 (10)	
2 [<i>n</i> (%)]	12 (44)	12 (39)	
3 [<i>n</i> (%)]	6 (22)	7 (23)	
4 [<i>n</i> (%)]	2 (13)	4 (13)	
5 [<i>n</i> (%)]	2 (7)	5 (16)	
6 [<i>n</i> (%)]	0 (0)	0 (0)	

Mean (standard deviation), median (interquartile range)

PPI proton pump inhibitor, *ESA* erythropoiesis-stimulating agents, *HDL* high-density lipoprotein, *PT* INR prothrombin time international normalized ratio, *NA* not available.

^a Only diabetic patients.

^b One patient in each group was not included in the calculations due to missing data.

Table 2. Incidence rates of ischemic stroke in hemodialysis patients with atrial fibrillation by CHADS2 score

CHADS2 score	Patients (<i>n</i>)	Stroke events (<i>n</i>)	Incidence rate ^a (95% CI)
0	0	0	NA
1	8	0	0
2	24	3	5.3 (1.1 – 15.6)
3	13	5	26.1 (8.5 – 60.9)
4	6	1	10.3 (0.3 – 57.6)
5	7	3	72.0 (14.8 – 210.4)
6	0	0	NA
Unknown ^b	2	1	22.2 (0.6 – 123.8)
<i>Overall</i>	60	13	11.8 (6.3 – 20.2)

CI confidence interval, *NA* not available.

^a Per 100 person-years.

^b Two patients were not included in the calculations due to missing data.

Table 3. Number of events, incidence rates, and unadjusted hazard ratios for all study outcomes and warfarin use

Outcome	Warfarin	Number of Events	Incidence Rate ^a (95% CI)	Unadjusted Hazard Ratio (95% CI)
Ischemic stroke	Users	8	14.8 (6.4 - 29.2)	1.94 (0.63 – 5.93)
	Non-users	5	8.9 (2.9 - 20.8)	
Major bleeding	Users	3	5.3 (1.1 – 15.5)	0.85 (0.19 – 3.64)
	Non-users	4	6.6 (1.8 – 17.)	
All-cause mortality	Users	9	14.2 (6.5 - 26.9)	1.00 (0.40 – 2.52)
	Non-users	9	14.2 (6.5 - 26.9)	

CI confidence interval.

^a Per 100 person-years.

Table 4. Predicted hazard ratios for new ischemic stroke and warfarin use

Models	Hazard Ratio (95% CI)
Intention-to-treat	
Unadjusted	1.94 (0.63 - 5.93)
Adjusted for CHADS2 score	3.36 (0.94 - 11.23)
Matched by propensity score	3.36 (0.67 - 16.66)
Patients censored due to changes in warfarin use	
Unadjusted	1.84 (0.62 - 5.63)
Adjusted for CHADS2 score	3.17 (0.92 - 10.93)
Matched by propensity score	3.21 (0.65 - 15.95)

CI confidence interval.

Table 5. Propensity-score matching and characteristics of the study cohort

Baseline characteristics	Users (<i>n</i> = 16)	Non-users (<i>n</i> = 16)	<i>P</i> value
Age (years)	70.9 (9.8)	68.1 (9.1)	0.41
Male gender [<i>n</i> (%)]	8 (50)	6 (38)	0.72
Body mass index (kg/m ²)	20.9 (3.7)	20.8 (2.2)	0.91
Duration of dialysis (years)	12 (3, 30)	11 (2, 24)	0.79
Cause of end-stage kidney disease			1.00
Glomerulonephritis [<i>n</i> (%)]	9	10	
Diabetes [<i>n</i> (%)]	3	3	
Other [<i>n</i> (%)]	4	3	
Type of vascular access			1.00
Fistula [<i>n</i> (%)]	13	12	
Graft [<i>n</i> (%)]	3	4	
Medical history			
Ischemic stroke [<i>n</i> (%)]	4	4	1.00
Transient ischemic attack [<i>n</i> (%)]	0	2	0.48
Hemorrhagic stroke [<i>n</i> (%)]	0	0	
Coronary artery bypass graft [<i>n</i> (%)]	2	1	1.00
Percutaneous coronary intervention [<i>n</i> (%)]	2	1	1.00
Malignancy [<i>n</i> (%)]	1	4	0.17
Medication			
Antiplatelet drug [<i>n</i> (%)]	10	10	1.00
Histamine-2 blocker or PPI [<i>n</i> (%)]	9	6	0.48
ESA [<i>n</i> (%)]	13	11	0.69
Anti-hypertensive drug [<i>n</i> (%)]	7	8	1.00
Comorbidities			
Diabetes mellitus [<i>n</i> (%)]	3	3	1.00
Predialysis systolic blood pressure (mmHg)	139 (26)	147 (21)	0.40
Predialysis diastolic blood pressure (mmHg)	79 (16)	82 (20)	0.64
Laboratory data			
Serum albumin (mg/dL)	3.7 (0.3)	3.9 (0.2)	0.20
Hemoglobin (g/dL)	10.5 (1.4)	10.8 (1.4)	0.59
Total cholesterol (mg/dL)	148 (23)	165 (31)	0.09
HDL-cholesterol (mg/dL)	49 (15)	45 (14)	0.56
Triglyceride (mg/dL)	78 (61, 123)	86 (63, 154)	0.38

HbA1c (%) ^a	5.6 (0.6)	6.9 (0.6)	0.06
Single –pooled Kt/V	1.50 (0.20)	1.49 (0.46)	0.92
Ultrafiltration/hour (mL/hour)	687 (183)	761 (243)	0.34
Transport to dialysis facilities			1.00
Walk alone without a cane [<i>n</i> (%)]	11	12	
Walk alone with a cane [<i>n</i> (%)]	1	2	
Walk with support person [<i>n</i> (%)]	1	0	
Wheelchair [<i>n</i> (%)]	3	2	
Stretcher [<i>n</i> (%)]	0	0	
CHADS2 score			1.00
1	2	2	
2	6	7	
3	4	3	
4	2	1	
5	2	3	
6	0	0	

Mean (standard deviation), median (interquartile range)

PPI proton pump inhibitor, *ESA* erythropoiesis-stimulating agents, *HDL* high-density lipoprotein.

^a Only diabetic patients

Table 6. Cause of death and warfarin use at baseline

Cause of death	Warfarin user (<i>n</i> = 9)	Non-user (<i>n</i> = 9)
Cardiac failure	2	4
Infectious disease	2	2
Hemorrhage	2	1
Malignant tumor	0	1
Cachexia/Uremia	1	0
Suicide	1	0
Unknown	1	1