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Oral Communication Abstract
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Comparison of Anticoagulation and no Anticoagulation in Patients with Atrial Fibrillation on Dialysis: A Single-Center Retrospective Study

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Objectives:

Atrial fibrillation (AF) is common supraventricular arrhythmia in patients with dialysis. Although the need for anticoagulation in patients with AF is high, there is still controversy about the efficacy of anticoagulation in patients with end-stage renal disease(ESRD). We aimed to compare the risk and benefit between the low-dose apixaban (2.5 mg twice a day) group and the warfarin group among the patients with AF and on dialysis.

Methods:

We did a retrospective cohort study of patients who were diagnosed with AF or atrial flutter and on dialysis in Wonju Severance Christian Hospital. We collected medical records from 2010 to 2020.

Results:

Among the 99 patients who were diagnosed with AF and on dialysis, 36 received anticoagulation (17 had warfarin, and 19 had apixaban 2.5 mg twice a day), while 63 received no anticoagulation. No significant difference in baseline characteristics was noted between patients with anticoagulation and those with no anticoagulation. Although the no anticoagulation group experienced more all-cause (39.7% vs. 32.4%, $p = 0.572$) and cardiovascular (17.6% vs. 10.8%, $p = 0.197$) mortality than the anticoagulation group, the difference was not statistically significant. Compared with patients with warfarin, those with apixaban 2.5 mg twice a day exposure experienced more frequent major adverse cerebrovascular events (hazard ratio, 15.74; 95% confidence interval, 1.24–200.72), but the difference was not statistically significant in the multivariate Cox regression analysis (hazard ratio, 2.80; 95% confidence interval, 0.34–23.02).

Conclusions:

Anticoagulation group showed a higher risk of bleeding than no anticoagulation group and there was no significant difference in all-cause mortality between two groups. Apixaban 2.5mg twice a day was not inferior to warfarin considering the risk and benefit of anticoagulation in patients on dialysis except for the cerebrovascular risk. To sum up, we could not recommend low-dose apixaban for anticoagulation in patients with ESRD, and further large studies are needed.

Table 1

Table 2. Comparison of NOAC and Coumadin

	Warfarin (17)	Apixaban (19)	*P* value
Age	69.0 ± 11.4	71.3 ± 15.0	0.336
Male (N, %)	7(41.2)	12 (63.2)	0.330
HD (N, %)	10 (58.8)	18 (94.7)	0.014
BMI	23.5 ± 4.0	23.6 ± 3.3	0.703
Follow-up duration (months)	839.8 ± 723.3	151.3 ± 95.8	<0.001
HTN (N, %)	17 (100)	19 (100)	0.484
DM (N, %)	10 (58.8)	5 (26.3)	0.104
Dyslipidemia (N, %)	7 (41.2)	11 (57.9)	0.730
Bleeding Hx (N, %)	2 (14.3)	3 (15.8)	0.649
Femur Fx (N, %)	1 (5.9)	1 (5.3)	0.715
PKD (N, %)	1 (5.9)	1 (5.3)	0.715
HF (N, %)	7 (41.2)	9 (47.3)	0.540
CAOD (N, %)	4 (23.5)	5 (26.3)	0.612
Mechanical valve (N, %)	5 (29.4)	2 (10.5)	0.140
CABG (N, %)	2 (14.3)	0 (0)	0.204
PAOD (N, %)	0 (0)	1 (5.3)	0.541
Old infarction (N, %)	3 (17.6)	4 (21.1)	0.596
Old brain hemorrhage (N, %)	2 (14.3)	1 (5.3)	0.438
Osteoporosis (N, %)	1 (5.9)	0 (0)	0.459
LC (N, %)	1 (5.9)	2 (10.5)	0.562
INR >3 (N, %)	12 (70.6)	2 (10.5)	0.001
Transfusion, 3 units (N, %)	5 (29.4)	3 (15.8)	0.254
Duration of medication (months)	255.5 ± 143.7	120.3 ±164.2	0.393
EF	55.1 ± 14.2	52.3 ± 12.8	0.446
E/E'	19.0 ± 6.9	25.1 ± 12.4	0.106
BNP	1963.4 ± 1676.1	1827.3 ± 1254.5	0.751
WBC	7553 ± 2980	7954 ± 3577	0.753
Hb	11.1 ± 1.5	9.7 ±1.3	0.007
Platelet count	188.9 ± 58.7	184.1 ± 81.3	0.667
AST	29.0 ± 15.7	39.7 ± 54.6	0.934
ALT	22.6 ± 19.2	44.7 ± 106.7	0.908
Total bilirubin	0.5 ± 0.3	0.7 ± 0.8	0.497
INR	1.8 ± 0.8	1.5 ± 0.6	0.267
LDL	82.3 ± 37.0	52.6 ± 22.4	0.004
CRP	4.1 ± 6.5	2.5 ± 3.9	0.855
Medication			
Aspirin (N, %)	6 (35.3)	3 (15.8)	0.147

Table 2

Table 4. Comparison of Apixaban 2.5 mg Twice a Day and Warfarin

	Crude	Model 1	Model 2
All-cause mortality	3.08 (0.72–13.21)	3.06 (0.63–14.96)	2.02 (0.38–10.61)
MACE	1.69 (0.30–9.63)	2.92 (0.41–20.87)	2.80 (0.34–23.02)
Any bleeding	3.52 (0.59–21.12)	2.63 (0.42–16.35)	1.90 (0.28–12.90)
Cerebrovascular disease	19.67 (2.01–184.53)	25.85 (2.00–355.22)	15.74 (1.24–200.72)

Abbreviation: MACE, major adverse cardiovascular events.

Model 1: adjusted for age sex.

Model 2: adjusted for Model 1 + Charlson comorbidity index and CHA_2DS_2-VASc and HAS-BLED scores..