Anticoagulation Drug Prescription Disparities Impact Mortality and Stroke Rates

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Background

A wide variation in prescription patterns exists when treating atrial fibrillation with anticoagulation (AC). We aim to assess the trends in anticoagulation prescription patterns in patients with atrial fibrillation (AF) admitted to Tulane Medical Center and the impact of warfarin and direct oral anticoagulants (DOACS) on death and hospitalization.

Methods

We conducted a cohort-based epidemiological study. It included all AF patients admitted to Tulane Medical Center, New Orleans, Louisiana from January 2010 to March 2019. We sought to compare differences in AC prescription patterns, and the implications of AC type on stroke and death using “time-to-event” Kaplan-Meier representations.

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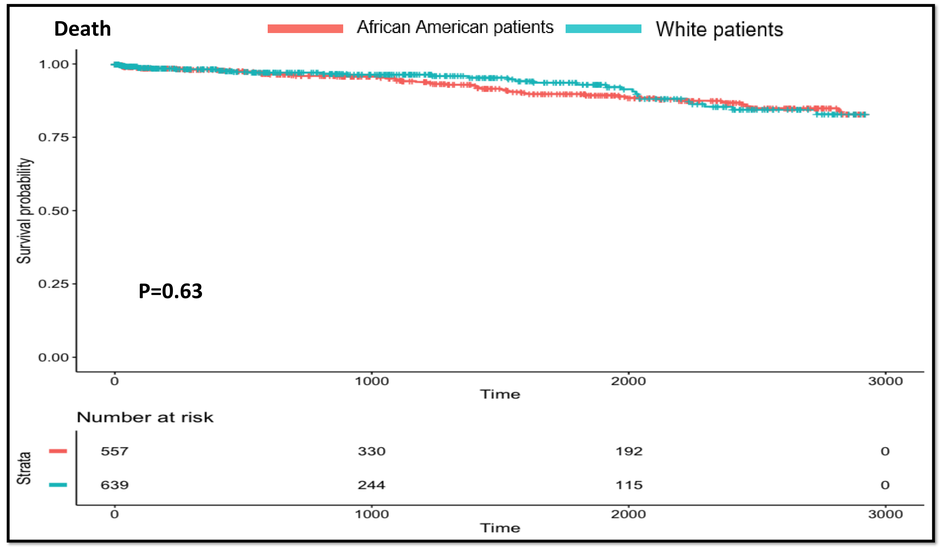

Figure 1: **Kaplan-Meier Curve** Comparing **Mortality** Among White and African American Patients Treated with AC.

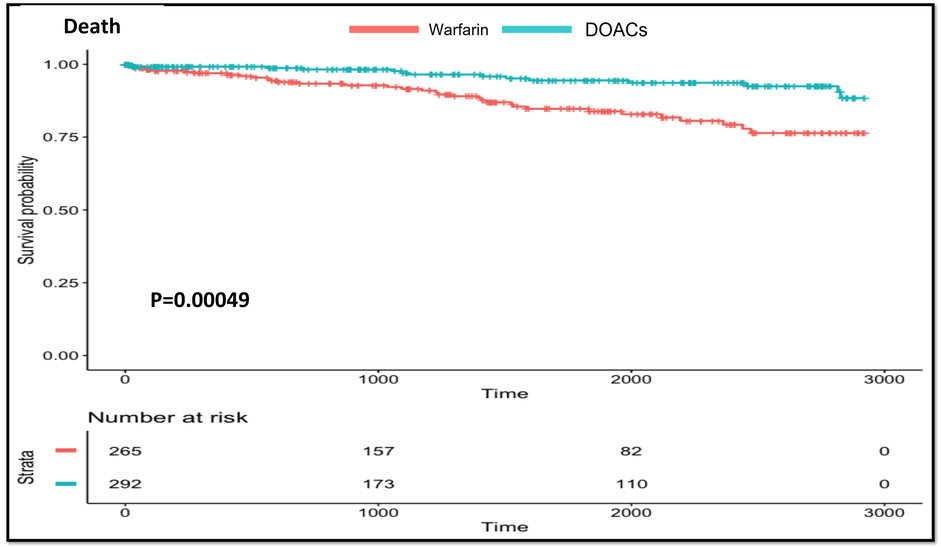

Figure 2: **Kaplan-Meier Curve** Comparing **Mortality** Among African American Patients Treated with Warfarin vs. DOACs.

Results

A total of 1196 patients taking anticoagulation were included, of whom 44% were on warfarin and 56% on direct oral anticoagulants. The median age was 65.5 years, with no significant difference between warfarin and DOACs groups (66 vs 65 years, p=0.18). There was no difference in terms of sex between both groups (p=0.10). African Americans were prescribed warfarin more than DOAC (50.6% vs 43.5%), whereas white patients tend to use DOACs more than warfarin (56.5% vs 49.4%) (p=0.01). Among African American patients, rates of death (**HR 0.35, 95% CI 0.18-0.65, p<0.001**) and stroke (**HR 0.22, 95% CI 0.1-0.49, p<0.001**) were significantly lower among those prescribed DOACs.

	Warfarin (N=524)	**DOACs (N=672)**	**Total (N=1196)**	**p value**
Age (Median [Q1, Q3])	66 [60, 71]	65 [58, 72]	65.5 [59, 72]	0.18
Sex				
Female	130 (24.8%)	195 (29.0%)	325 (27.2%)	0.10
Male	394 (75.2%)	477 (71.0%)	871 (72.8%)	
Race				
African American	265 (50.6%)	292 (43.5%)	557 (46.6%)	0.01
White	259 (49.4%)	380 (56.5%)	639 (53.4%)	
Comorbidities				
Hypertension	439 (83.8%)	551 (82.0%)	990 (82.8%)	0.42
Hyperlipidemia	345 (65.8%)	400 (59.5%)	745 (62.3%)	0.03
Coronary Artery Diseases	223 (42.6%)	210 (31.2%)	433 (36.2%)	<0.001
Peripheral Artery Diseases	31 (5.9%)	24 (3.6%)	55 (4.6%)	0.06
Diabetes	303 (57.8%)	330 (49.1%)	633 (52.9%)	0.003
CHA_2DS_2-VASc (mean [SD])	2.05 [1.22]	2.06 [1.25]	2.06 [1.24]	0.79

Conclusion

Lower prescription rates of DOACS were associated with increased mortality and stroke rates in certain patient groups. Addressing these disparities is crucial for ensuring equitable access to effective treatments.