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Letter to the Editor

Overuse of Anticoagulation in Treatment of Atrial Fibrillation Patients in University Hospitals of Tehran

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Dear Editor-in-Chief

Atrial fibrillation (AF) is the most common cardiac arrhythmia in clinical practice. Patients with AF have increased rates of mortality and are strongly at greater risk of stroke (1). Despite strong recommendation of anticoagulant therapies in AF patients, real world data demonstrates low adherence of physicians to prescribe anticoagulant medications for AF patients (2, 3). A study was designed to compare the practice of anticoagulant therapies in AF patients in two major university hospitals affiliated with Tehran University of Medical Sciences (TUMS) in Tehran with available guidelines.

Emergency department visits in two affiliated hospitals of TUMS were screened for patients with AF arrhythmia on ECG studies. Patients were informed about the study and signed an informed consent. The patient selection was based on a non-random case finding from September 2012 to September 2013. The risk assessment was done according to Congestive heart failure, Hypertension, Age≥75 years, Diabetes, prior Stroke ($CHADS_2$) score system (4). The patients were allocated to low risk ($CHADS_2$ = 0), intermediate risk ($CHADS_2$ = 1 or 2) or high risk ($CHADS_2$ >2) groups. The guideline treatment was defined as no anticoagulants or antiplatelet therapy ($CHADS_2$ = 0), receiving low dose aspirin or anticoagulation ($CHADS_2$ = 1 or 2) and anticoagulation therapy with a vitamin K antagonist (warfarin) or antiplatelet therapy with low dose (80mg) aspirin in case of warfarin contraindication ($CHADS_2$ >2). Medication of patients was recorded off the medical documents and discharge notes and was further confirmed with the patients after discharge via telephone follow-ups. The treatment of patients was then compared with the available guidelines (2011).

Overall, 123 patients were included to the analyses of the study. The mean age of patients was 70.4±13.3 years. Males were slightly more prevalent than females, 71 males (57.7%) versus 52 females (42.3%). Details of observed treatment pattern in each group of patients are shown in Table 1. The guideline adherence of treatment in low risk patients was 75%, which is comparable with reports of 60% (2) and 76.8% (3) in similar studies. However, 25% of low risk patients received anticoagulation therapies, which is an overtreatment (Fig. 1). In intermediate risk patients, 64.3% received guideline adherent therapies, which is similar to reports of 64.8% (5) and 54.2% (6) in litera-

ture. However, double anticoagulation therapy was seen in 25.7% of patients, which was considered as overtreatment. In high-risk group of patients, guideline adherence was seen only in 31% of patients, similar to reports in literature (6). The contraindication of warfarin was not present in any of 7 (24.2%) patients receiving aspirin in high-risk group patients, thus these patients were considered to be undertreated. Surprisingly, 44.8% of patients in high-risk group were prescribed with double anticoagulation. This rate of overtreatment was significantly higher than 6% in literature (6).

Table 1: Therapeutic medications in AF patients within the two groups of study

Medication	Low risk 24 (19.5%) $CHADS_2 = 0$	Intermediate risk 70 (56.9%) $CHADS_2= 1$ or 2	High risk 29 (23.6%) $CHADS_2>2$
Aspirin	8 (33.3)	25 (35.7)	7 (24.2)
Warfarin	6 (25.0)	20 (28.6)	9 (31.0)
Aspirin and Warfarin	0 (0)	18 (25.7)	13 (44.8)
No medication	10 (41.7)	7 (10.0)	0 (0)

Previous studies have shown that double anticoagulation does not benefit patients with lowering stroke risk; rather double anticoagulation increases the chance of adverse effects including bleeding events (7). However, 25.2% (31/123) of all patients in this study were prescribed with both antiplatelet and anticoagulant medication. Although strong evidences support the use of anticoagulants in accordance to guidelines in practice, the physicians are not generally treating patients with AF in an evidence-based manner. The study represented the low adherence of Iranian physicians in treatment of AF patients to current suggested guideline for prevention of stroke. The results were in line with the available literature of developed and developing countries. However, an overtreatment of patients was seen in the study, which is rarely seen in the literature.

It seems that physicians are prescribing medications to patients with AF irrespective to stroke risk assessment tools. This finding necessitates the need for another study to assess the complications of anticoagulants in AF patients in Tehran, Iran. Although the results of this study are of university-affiliated hospitals, similar pattern of practice is expected in other health care service providers (8).

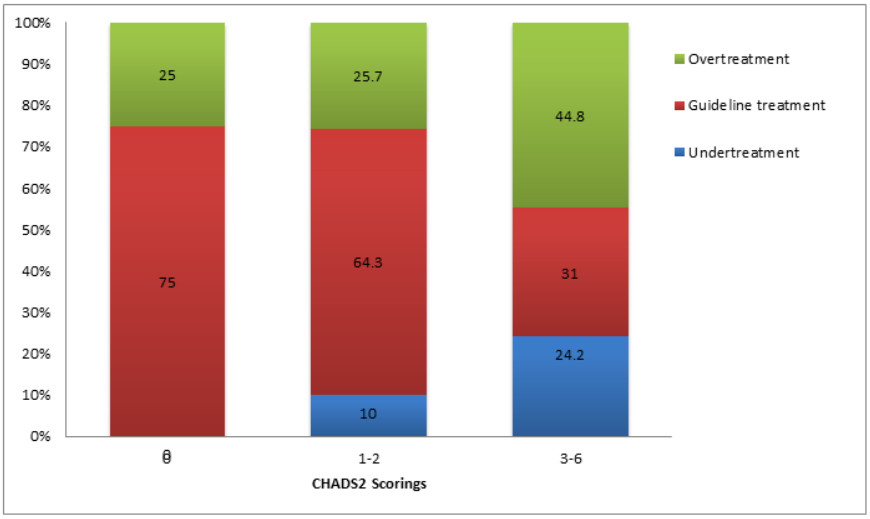

Fig. 1: Treatment of patients in accordance to $CHADS_2$ recommendations

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