

Psychological effects of treatment with novel oral anticoagulants in non-valvular atrial fibrillation patients

To the Editor,

I have read with great interest the article entitled "Comparison of health-related quality of life among patients using novel oral anticoagulants or warfarin for non-valvular atrial fibrillation," published online in *Anatol J Cardiol* 2015 Jul 14. (Epub ahead of print) by Balcı et al. (1). In their study, the authors reported that warfarin-treated patients had higher levels of self-reported symptoms of depression and anxiety and compromised health-related quality of life compared with novel oral anticoagulant (NOAC)-treated patients. I have the following comments and concerns:

In previous studies, it has been reported that the quality of life was significantly reduced in atrial fibrillation patients compared with that of healthy subjects (2). Therefore, the authors should state if there was any difference between the two groups in terms of atrial fibrillation duration at the beginning of the study. In addition, many cardiovascular drugs have been reported to cause depression and anxiety. In a study by Rathman et al. (3), it has been demonstrated that prescription of calcium channel blockers and beta-blockers, which are widely used for rate control in atrial fibrillation patients, can increase the risk of depression in diabetic patients. I was wondering if there was any difference between warfarin-treated patients and NOAC-treated patients in terms of using these cardiovascular medications.

Furthermore, it is well established that the risk of atrial fibrillation is closely associated with thyroid activity, and the prevalence of thyroid dysfunction in patients with atrial fibrillation was in the range of 0%–24% (4, 5). In addition, it has been shown that thyroid dysfunction itself may impair the quality of life and cause psychological symptoms. Therefore, I think that patients with hyperthyroidism and hypothyroidism should be excluded from the study.

Finally, electrical cardioversion can cause psychological discomfort in atrial fibrillation patients. Is there any attempted cardioversion procedure in the last month before beginning the study and is there any difference between two groups in terms of attempted cardioversion procedure? It would be helpful if the authors provided this information.

In conclusion, despite the aforementioned limitations, NOAC therapy seems to be psychologically better accepted than warfarin therapy in non-valvular atrial fibrillation patients.

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Author's Reply

To the Editor,

We thank the authors of the letter for their valuable comments. In our study entitled "Comparison of health-related quality of life among patients using novel oral anticoagulants or warfarin for non-valvular atrial fibrillation," published online in *Anatol J Cardiol* 2015 Jul 14. (Epub ahead of print), we mainly focused on the oral anticoagulant-type-related difference in the quality of life and emotional status (1). Although, many widely used treatments in cardiology may have effects on the psychological condition (2), our study did not reveal any significant difference between novel oral anticoagulant (NOAC) and warfarin users because of the prescriptions of calcium channel blockers (NOAC 47.5% vs. warfarin 44%, $p=0.655$) and beta-blockers (NOAC 89% vs. warfarin 83.5%, $p=0.282$). In addition, patients with known thyroid dysfunction were already excluded from the study because of the potential coexistence of depression and anxiety as well as the impaired quality of life in such population. When the patients were evaluated according to the atrial fibrillation (AF) duration, the median AF duration did not significantly differ between the study groups [warfarin 36 (21–56) months vs. NOAC 34 (20–60) months, $p=0.153$]. Although, in the beginning, we did not assess the patients according to the presence of prior electrical cardioversion, additional analyses showed that