Possible renoprotective effects of dabigatran

To the Editor,

I read with great interest the article by Altın et al. (1) with reference to their experience on dabigatran treatment for acute renal infarction (ARI) in a case report entitled "A novel oral anticoagulant, dabigatran, in acute renal infarction" published in Anatol J Cardiol 2015; 15: 158-9. The authors claimed that in patients with ARI, a direct thrombin inhibitor, dabigatran, is preferred for both treatment and conservative anticoagulation. I thank them for their important contribution in clarifying a crucial topic that was lacking definitive data and that had insufficient guidelines.

Conservative anticoagulant treatment regimens are important for protecting stroke and systemic embolic events in patients with prothrombotic disorders, such as atrial fibrillation (AF), severe renal failure, etc. (1, 2). Results of recent studies increased the reliability of the usage as an alternative therapy with novel oral anticoagulant agents in the treatment of coagulative disorders. As the authors mentioned, the American College of Cardiology and American Heart Association reported that novel oral anticoagulants can be preferred as an alternative to warfarin for the acute or conservative treatment of procoagulant disorders, such as AF and venous thromboembolism, in selected patients (3, 4). However, it should be kept in mind that microembolism can occur even under anticoagulant therapy in these patients (2). Therefore, the potential effects of anticoagulants on end organs were investigated in current reports. In particular, the protective effects of these agents were evaluated after ischemia reperfusion (IR) injury, which occurred in healthy individuals, or hypercoagulability state patients under anticoagulant therapy (2, 5). Yazıcı et al. (5) reported that dabigatran etexilate seems to have potential renoprotective effects against IR injury in an experimental model. They detected quite low renal prolidase levels, which were determined as a predictive marker for catabolic process in the dabigatran-treated group after IR (5). Similarly, a positive outcome was reported in an ARI patient by Altın et al. (1). The favorable results of dabigatran can be related with the reducing thrombosis burden and/or owing to the potential cellular protective effects. These preliminary data and case reports can be possibly directed to the researchers to make more comprehensive cohort studies for clarifying the organ-specific and cellular effects of dabigatran.

To sum up, I believe that further studies will reveal new horizons on anticoagulation strategies. However, with the current knowledge available, it seems that dabigatran is a good alternative to warfarin for patients with a procoagulant tendency.

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References

1. Altın C, Sakallıoğlu O, Gezmiş E, Müderrisoğlu H. A novel oral anticoagulant, dabigatran, in acute renal infarction. Anatol J Cardiol 2015; 15: 158-9. [CrossRef]
2. Demirtaş S, Karahan O, Yazıcı S, Güçlü O, Çalışkan A, Tezcan O, et a. Investigation of possible prophylactic,renoprotective, and cardioprotective effects of thromboprophylactic drugs against ischemia-reperfusion injury. Kaohsiung J Med Sci 2015; 31: 115-22. [CrossRef]
3. Eikelboom JW, Wallentin L, Connolly SJ, Ezekowitz M, Healey JS, Oldgren J, et al. Risk of bleeding with 2 doses of dabigatran compared with warfarin in older and younger patients with atrial fibrillation: an analysis of the randomized evaluation of long-term anticoagulant therapy (RE-LY) trial. Circulation 2011; 123: 2363-72. [CrossRef]
4. Wann LS, Curtis AB, Ellenbogen KA, Estes NA, Ezekowitz MD, Jackman WM, et al. American College of Cardiology Foundation/American Heart Association Task Force. 2011 ACCF/AHA/HRS focused update on the management of patients with atrial fibrillation (update on Dabigatran): a report of the American College of Cardiology Foundation/American Heart Association Task Force on practice guidelines. Circulation 2011; 123: 1144-50. [CrossRef]
5. Yazıcı S, Karahan O, Oral MK, Bayramoğlu Z, Ünal M, Çaynak B, et al. Comparison of renoprotective effect of dabigatran with low-molecular-weight heparin. Clin Appl Thromb Hemost 2015. [CrossRef]

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