Austin Journal of Clinical Neurology

Open Access

Austin Publishing Group

Editorial

Early Administration of OAC (Oral Anticoagulant) for Acute Ischemic Stroke Patients with Atrial Fibrillation

Eiichi Nomura*

Department of Neurology, Hiroshima City Hiroshima Citizens Hospital, Japan

***Corresponding author:** Eiichi Nomura, Department of Neurology, Hiroshima City Hiroshima Citizens Hospital, 7-33, Moto-machi, Naka-ku, Hiroshima City 730-8518, Japan; Email: nomura@mwc.biglobe.ne.jp

Received: December 09, 2014; **Accepted:** January 30, 2015; **Published:** February 05, 2015

Editorial

Cardioembolic stroke (CES) is the most severe type of acute ischemic stroke (AIS) [1,2]. Compared with other types, patients with CES are prone to early (1-10%) [1,2] and long-term stroke recurrence (2-15% in the first year) [3]. Atrial fibrillation (Af) has been reported to be a leading risk factor and causes approximately three-quarters of CES [1,2]. An oral anticoagulant (OAC), warfarin, can reduce the recurrence of CES due to Af by 66% [3]. Although recurrence after CES frequently occurs during the acute stage [1,2], the efficacy of intravenous anticoagulant therapy like heparin has not been proven [4-6], and the timing of starting OAC for those patients is still unclear. Furthermore, titrating warfarin approximately is sometimes difficult at the acute stage owing to its slow action, with the interaction with other drugs. An initial prothrombic state induced by warfarin is also a concern [7,8]. As a countermeasure for this, bridging heparin with warfarin is performed in daily clinical practice, although its efficacy was not demonstrated in a previous symptom-oriented study [9]. We reported that achieving target prothrombin time–international normalized ratio (PT-INR) at 2 weeks in AIS patients with Af was significantly associated with a lower frequency of new recurrent lesions on diffusion-weighted magnetic resonance imaging; however, only 42.3% of all patients could achieve target PT-INR at 2 weeks [10].

Recently, some non-vitamin K antagonist oral anticoagulants (NOACs) were developed and have been reported to have equivalent or more power than warfarin to reduce stroke recurrence in Af patients; as an additional advantage, they are also associated with fewer hemorrhagic complications than warfarin [11,12]. There is still little evidence about the mode of administering NOACs to AIS patients. As a rule of thumb, the 1-3-6-12 day rule is advocated: anticoagulation will be re-instituted after 1 day in patients with a transient ischemic attack (TIA), after 3 days with a small, non-disabling infarct, and after 6 days with a moderate stroke, while large infarcts involving large parts of the arterial territory will be treated not before 2 (or even 3) weeks [13]. Recently, Shibazaki et al. reported a satisfactory outcome (no symptomatic intracerebral hemorrhage and no recurrent stroke or TIA within 3 months) in 41 patients with AIS and Af for whom an NOAC (dabigatran or rivaroxaban) was given at a median interval of 2 days from onset [14]. NOACs may be superior to warfarin to prevent recurrence from the acute stage owing to their rapid action, simplicity, and safety. Further rigorous study to find the best approach for the early administration of OAC for AIS patients with Af is warranted.

References

1. Arboix A, Alio J. Acute cardioembolic cerebral infarction: answers to clinical questions. Curr Cardiol Rev. 2012; 8: 54-67.
2. Arboix A, Alió J. Acute cardioembolic stroke: an update. Expert Rev Cardiovasc Ther. 2011; 9: 367-379.
3. [No authors listed]. Secondary prevention in non-rheumatic atrial fibrillation after transient ischaemic attack or minor stroke. EAFT (European Atrial Fibrillation Trial) Study Group. Lancet. 1993; 342: 1255-1262.
4. Guedes LC, Ferro JM. A systematic review of immediate anticoagulation for ischemic stroke of presumed cardioembolic origin. Stroke. 2008; 39: e81-82.
5. Micheli S, Agnelli G, Caso V, Paciaroni M. Clinical benefit of early anticoagulation in cardioembolic stroke. Cerebrovasc Dis. 2008; 25: 289-296.
6. Paciaroni M, Agnelli G, Micheli S, Caso V. Efficacy and safety of anticoagulant treatment in acute cardioembolic stroke: a meta-analysis of randomized controlled trials. Stroke. 2007; 38: 423-430.
7. D'Angelo A, Della Valle P, Crippa L, Fattorini A, Pattarini E, Viganò D'Angelo S. Relationship between international normalized ratio values, vitamin K-dependent clotting factor levels and in vivo prothrombin activation during the early and steady phases of oral anticoagulant treatment. Haematologica. 2002; 87: 1074-1080.
8. Azoulay L, Dell'Aniello S, Simon TA, Renoux C, Suissa S. Initiation of warfarin in patients with atrial fibrillation: early effects on ischaemic strokes. Eur Heart J. 2014; 35: 1881-1887.
9. Hallevi H, Albright KC, Martin-Schild S, Barreto AD, Savitz SI, Escobar MA, et al. Anticoagulation after cardioembolic stroke: to bridge or not to bridge? Arch Neurol. 2008; 65: 1169-1173.
10. Nomura E, Ohshita T, Imamura E, Wakabayashi S, Kajikawa H, Matsumoto M. Can early effective anticoagulation prevent new lesions on magnetic resonance imaging in acute cardioembolic stroke? J Stroke Cerebrovasc Dis. 2014; 23: 2099-2104.
11. Gómez-Outes A, Terleira-Fernández AI, Calvo-Rojas G, Suárez-Gea ML, Vargas-Castrillón E. Dabigatran, Rivaroxaban, or Apixaban versus Warfarin in Patients with Nonvalvular Atrial Fibrillation: A Systematic Review and Meta-Analysis of Subgroups. Thrombosis. 2013; 2013: 640723.
12. Ntaios G, Papavasileiou V, Diener HC, Makaritsis K, Michel P. Nonvitamin-K-antagonist oral anticoagulants in patients with atrial fibrillation and previous stroke or transient ischemic attack: a systematic review and meta-analysis of randomized controlled trials. Stroke. 2012; 43: 3298-3304.
13. Heidbuchel H, Verhamme P, Alings M, Antz M, Hacke W, Oldgren J, et al. EHRA practical guide on the use of new oral anticoagulants in patients with non-valvularatrial fibrillation: executive summary. Eur Heart J. 2013; 34: 2094-2106.
14. Shibazaki K, Kimura K, Aoki J, Saji N, Sakai K. Early initiation of new oral anticoagulants in acute stroke and TIA patients with nonvalvular atrial fibrillation. J Neurol Sci. 2013; 331: 90-93.

Nomura. © All rights are reserved

Citation: Nomura E. Early Administration of OAC (Oral Anticoagulant) for Acute Ischemic Stroke Patients with Atrial Fibrillation. Austin J Clin Neurol 2015;2(1): 1017.