Reviewer's report

Title: The determinants of stroke phenotypes were different from the predictors (CHADS2 and CHA2DS2-VASc) of stroke in patients with atrial fibrillation: a comprehensive approach

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Reviewer: Thomas J Bunch

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The manuscript entitled "The determinants of stroke phenotypes were different from the predictors (CHADS2 and CHA2DS2-VASc) of stroke in patients with atrial fibrillation: a comprehensive approach" is an observational study of 231 patients with known history of atrial fibrillation and new-onset ischemic stroke (symptoms within 3 days). The authors found in general that the minority of their patients that should have received warfarin (CHADS2>=2) were on warfarin and according to the supplemental figure 1, if one warfarin has a subtherapeutic INR. In this setting, there were no direct correlates with stroke phenotype, including those of atrial anatomy, diastolic function, and risk factors for stroke (CHADS2, CHADS2-VASc). Male gender tended to be associated with a larger territory stroke. Overall the manuscript is well written and the findings confirm the random nature of atrial embolic events in patients with various other stroke risk factors and underlying atrial fibrillation.

Unfortunately the lack of use of appropriate and/or therapeutic anticoagulants limits the data applicability, but reinforces the need for better patient and physician education. Further, with anticoagulants such as dabigatran that may be easier to take and maintain in therapeutic range, these outcomes moving forward may change. Subsequent study of these agents with these findings as background and/or comparative data will be interesting.

I have no additional significant concerns at this time.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I am on the scientific advisory committee of Johnson and Johnson regarding stroke prevention, as it relates to the use of Rivaroxaban, financial reimbursement (minor).