



Amgad N. Makaryus, M.D.
Professor, Department of Cardiology
Zucker School of Medicine at Hofstra/Northwell
Chairman, Department of Cardiology
Nassau University Medical Center
2201 Hempstead Turnpike
East Meadow, NY 11554
Fax (516) 572-3172

January 30, 2023

Dear Editor,

Thank you for the reviewer comments regarding our manuscript (Manuscript NO: 80407, Retrospective Cohort Study) titled, *“Utility of Short-Term Telemetry Heart Rhythm Monitoring and CHA₂DS₂-VASc Stratification in Patients Presenting with Suspected Cerebrovascular Accident.”* We have revised the manuscript according to the suggestions (please see the outline of revisions below). We believe that this revision has improved this manuscript substantially, and hope that it will be received in a favorable manner.

All authors listed on the manuscript have contributed sufficiently to the project to be included as authors, and have read and approved the manuscript. This work has not been previously published, and is not currently under review elsewhere. There are no conflicts of interest with regard to this paper for any of the authors. Please address any correspondence to me at the address below. Should you need to contact me by telephone, my work telephone number is 516-296-2567. My fax number is 516-572-3172.

LIST OF REVISIONS AND RESPONSES in bold and changes made to revised manuscript:

Reviewer #1:

Specific Comments to Authors: *The article is good. However, refinements need to be done. Discussion needs to be comprehensive, including current trends and all available options, like ECG patch monitors, smart watches etc.*

Thank you very much for your comments. Detail about comprehensive options and trends has been added to the discussion. Discussion of the additional options of outpatient EKG monitoring (wearables, patches, Apple watch etc.) were added to the discussion section.

Reviewer #2:

Specific Comments to Authors: *I congratulate the authors for choosing this very relevant research topic. There is dire need of judicious resource allocation and the same has been further highlighted by the COVID-19 pandemic. The authors have shown that CHA₂DS₂-VASc score can guide in deciding the need for inpatient telemetry monitoring after CVA. This will ultimately help decrease health care and patient*

related cost and conserve precious health care resources. I have a few concerns however which need to be addressed

- 1) *The study period was long back from 2014-2016. Why have the authors not published the results yet. Do we have a 5 year follow up available in that case?*

Thank you very much for your comments. We were unable to publish this study earlier because we were undergoing plans for a hospital initiative to educate staff on appropriate use of telemetry resources, but COVID intervened and our plans for the study were delayed. We do not have follow up at this time, but plan to put this together for a future study and also highlight the trends we will see with specific targeted education efforts.

- 2) *The results are rather short. I would have liked to see the individual factors of the CHA₂DS₂-VASc score and if any particular risk factor rather than the entire CHA₂DS₂-VASc score was more closely related to CVA/TIA*

Unfortunately, we did not record individual scores for the patients and subsequently did not conduct a specific factor analysis. Instead, we used the overall CHA₂DS₂-VASc score. However, this is a great suggestion provided for consideration for our future research and study on this topic.

- 3) *The result and discussion is way too short for a research article and needs addition. The figures are non-informative and I suggest removing them from the manuscript.*

Thank you very much for these comments. The figures were removed from the manuscript as suggested. Additional information was added to the results and the discussion was significantly expanded to address the reviewer's comments including female sex as a risk factor for neurological effects in atrial fibrillation, MACCE rates, and outpatient options for EKG monitoring.

- 4) *Female sex has been a proven risk factor for neurological effects in atrial fibrillation with increased incidence of both dementia and stroke compared to men. The same should be added in discussion and the relevant references be added. My suggestions are :-*

a) Kostopoulou A, Zeljko HM, Bogossian H, Ciudin R, Costa F, Heijman J, Kochhaeuser S, Manola S, Scherr D, Sohal M, Wakili R, Wolf M, Irfan G; on the behalf of the DAS-CAM participants-2017-2018. Atrial fibrillation-related stroke in women: Evidence and inequalities in epidemiology, mechanisms, clinical presentation, and management. Clin Cardiol. 2020 Jan;43(1):14-23. doi: 10.1002/clc.23284. Epub 2019 Nov 6. PMID: 31691981; PMCID: PMC6954380.

b) Batta A, Sharma YP, Hatwal J, Panda P, Vinay Kumar BG, Bhogal S. Predictors of dementia amongst newly diagnosed non-valvular atrial fibrillation patients. Indian Heart J. 2022 Nov 30;S0019-4832(22)00375-3. doi: 10.1016/j.ihj.2022.11.009. Epub ahead of print. PMID: 36462552.

c) Chen YL, Chen J, Wang HT, Chang YT, Chong SZ, Hsueh S, Chung CM, Lin YS. Sex Difference in the Risk of Dementia in Patients with Atrial Fibrillation. *Diagnostics (Basel)*. 2021 Apr 23;11(5):760. doi: 10.3390/diagnostics11050760. PMID: 33922776; PMCID: PMC8145027.

Thank you very much for supplying these references. They were used and the following was added to the discussion:

“Atrial fibrillation affects over 5 million people in the United States and increases the risk of stroke by 5-fold compared to the rest of the population.^{11,12} The initial presentation of atrial fibrillation can be asymptomatic subclinical.¹³ The economic burden of people with previously unknown and asymptomatic atrial fibrillation is estimated to be over 3 billion dollars.^{14,15} Of those with atrial fibrillation, female sex is an established risk factor for stroke, cognitive dysfunction, and dementia.¹⁶⁻¹⁸”

5) Discuss about the MACCE rates amongst patients on DAPT vs oral anticoagulation in a patient who has suffered from TIA/CVA. Mention the importance of recognition of AF in this group.

This is a great point and was added to further the discussion. The following was included:

“Patients diagnosed with atrial fibrillation with a concerning CHA₂DS₂-VASc score should be treated with anticoagulation therapy to avoid major adverse cardiac and cerebrovascular events (MACCE). The AFIRE trial showed a temporal association between major bleeding and MACCE events, demonstrating the importance of optimal antithrombotic therapy and managing bleeding risk in patients with atrial fibrillation and stable coronary artery disease¹⁹. Direct oral anticoagulants are shown to be at least as efficacious and safe as warfarin among patients with non-valvular atrial fibrillation.²⁰ DOACs are shown to have lower MACE rates versus warfarin.²¹”

Many thanks in advance for your consideration.

Sincerely,



Amgad N. Makaryus, M.D.
Professor, Department of Cardiology
Donald and Barbara Zucker School of Medicine at Hofstra/Northwell
Chairman, Department of Cardiology
Nassau University Medical Center
2201 Hempstead Turnpike
East Meadow, NY 11554
Tel: 516-296-2567
Fax: 516-572-3172
Email: amakaryu@numc.edu