Review of: "Does Tocovid, a Tocotrienol-rich Vitamin E, Mitigate Postoperative Atrial Fibrillation after Coronary Artery Bypass Grafting (CABG) Surgery? A Single-Centre Double-blind Randomised Controlled Trial"

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Potential competing interests: No potential competing interests to declare.

Dear Editor,

This study is a well-designed and comprehensive study in the field. I would also like to make some contributions to this.

Objective and Study Design:
The objective of the study is well-defined, focusing on assessing the impact of Tocovid on several outcomes in post-CABG surgery patients, including POAF, mortality, morbidity, length of stay, and quality of life. The prospective randomized controlled trial design is appropriate for addressing the research question.
Patient Recruitment and Study Completion:
The recruitment process appears robust, with a large sample size (250 patients) and a high completion rate (95.6%). The low attrition rate (4.4%) strengthens the validity of the study.
Baseline Characteristics and Randomization:
The study appropriately reports the baseline characteristics of the patient groups, indicating successful randomization with no significant differences in key variables between the treatment and control groups, except for hypercholesterolemia.
Surgical Details and Outcomes:
The study provides relevant surgical details (e.g., cardiopulmonary bypass time, aortic cross-clamp time, number of anastomoses) and highlights significant differences in outcomes such as pleural effusion and CICU stay between the treatment and placebo groups.
Primary Outcome (POAF):
The incidence of POAF (36.4%) is reported, with no significant difference between the treatment and control groups. The observation of low tocotrienol levels post-CABG suggests a potential explanation for the lack of effect on POAF.
Quality of Life Measures:
The use of validated instruments like SF-36 and NHP to assess quality of life is appropriate. Although SF-36 did not show significant differences between groups, the improvement in sleep quality noted with NHP among the study group is noteworthy.
Conclusion and Limitations:
The conclusion accurately summarizes the study findings, acknowledging both the observed effects (better sleep quality, reduced pleural effusion) and the limitations (ineffective mitigation of POAF due to low tocotrienol levels).

Strengths and Recommendations:

Overall, the study appears well-conducted with several strengths, including robust recruitment and randomization processes. The authors could further elaborate on the implications of their findings and potential avenues for future research.

Recommendations for Improvement:

Clarify the method used to assess tocotrienol levels and their clinical relevance.

Provide more details on the reasons for observed differences in pleural effusion and CICU stay.

Discuss potential mechanisms underlying the observed effects on sleep quality and pleural effusion.

Consider discussing potential implications of the findings on patient care and future research directions.

In summary, this study contributes valuable insights into the effects of Tocovid in post-CABG patients, despite certain limitations. The findings have implications for both clinical practice and further research in this area.