Review of: "Effect of Tocovid - a Tocotrienol-rich Vitamin E - in Mitigating Post-Operative Atrial Fibrillation (POAF) after Coronary Artery Bypass Grafting (CABG) Surgery: A Double-blind Randomised Controlled Trial"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

I have gone through the paper and have a few comments to make.

Methodology limitations

1. The onset of action of oral VIT E after administration and blood levels achieved in a healthy population is important. How can we assume when the action in a post-op patient would commence.
2. Confounding factors are important

AF has a direct correlation with the use of high dose pre-operative beta-blockers, previous diagnosis of ACS, LV function, use of post-op inotropes

Age is an important factor for AF. Even in the general population incidence increases above 65 years of age. The mean age was low in the study.

Excluding EF with less than 30% is questionable. These groups benefit the most from CABG and the chance of AF is higher there and would have been more prudent to include them as well.

If it had been a larger cohort, a propensity-matched analysis could have given better results.

The major flaw in the paper is not giving the prep medications dose of beta-blockers. It is well known that withdrawing high-dose beta-blockers post-op is one of the major triggers of AF. Likewise, the inotropes used and the time when they were weaned off the ventilator is important.

Pleural effusion post-op may be due to multiple reasons. The use of preop antiplatelets and type of grafts(venous/ total arterial) all make a difference.

Post-op pericardial collection and late pericarditis are well known to provoke AF and the use of anticoagulants are important issues. There is no data on this.

Finally, the incidence of post-op AF in this study is very high and would be important to identify the reasons.

The very important factor of inotropes, post-op medications and residual risk enhancing factors are worth knowing. There are reports of reduction of post-op AF with ranolazine, trimetazidine and early beta-blockade. Likewise, there is increasing use of ivabradine and an increase in AF. It is important to know specifically the LA size in rheumatic patients who underwent MVR in addition.

I suppose many clarifications are required. All the same, it is a good effort by the authors in studying the effect of such molecules like VIT E in post-CABG patients. Of course, this is a negative study. All the same, any objective way of analysing the levels of glutathione reductase or other antioxidants in the blood would have proven the hypothesis. (rather than a chance finding).