

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.

The article is very well designed with a strong statistical component.

Some observations:

The title points only to tocovid and postoperative atrial fibrillation. No mention of secondary end points.

The decision on the dose of tocovid chosen for the purpose of this investigation is not adequately explained. The quoted references don't seem relevant.

Immediate post op serum levels of tocovid and it's metabolites are "not high enough" is blamed mostly on preoperative fasting and post op mechanical ventilation. This should have been foreseen when the study was designed and modified accordingly.

The absence of a positive effect in preventing POAF is probably enough as this is the focus of the investigation. The secondary endpoints presented distract from this focus.

Regarding post op pleural effusion, how was it diagnosed and how was it managed? Although statistically different, was it clinically significant?

Shorter post op mechanical ventilation is approx 35 minutes. quite irrelevant especially if the total ventilation times are rather long: just under 20 hours. Shorter ICU length of stay but with big variability as shown by IQR. Could it be explained by outliers?

There doesn't seem to be much influence of tocovid on the other secondary end points.

May be a bit surprisingly the lack of influence of tocovid on POAF doesn't use a lot of space in the discussion. It would have been useful to read more on the problem of dosage of tocovid and the issue of preop fasting and whether this could be considered in another investigation on the subject.

Also in the discussion the authors claim that tocovid reduced overall costs of the operation by reducing ICU length of stay but this is not necessarily true as this could also be explained by outliers as reflected in the big IQRs.