Reviewer’s report

Title: Fragmented QRS as an early predictor of left ventricular systolic dysfunction in healthy individuals: A nested case-control study in the era of speckle tracking echocardiography

Version: 0 Date: 25 Jun 2020

Reviewer: Eustachio Agricola

Reviewer's report:

The paper is potentially interesting. The main message is simple and clinically useful. However, there are many concerns particularly in the methods that the authors should consider in the revision process.

Major comments

Methods:
The methods should be described in a more scientific way. In particular:
- I guess that this is matched-control study. The authors should better define how the patients were sected and matched. In page 6, lines 9-11, the authors state "in case on mismatching, an appropriate person was randomly selected and substituted”. I don't understand this sentence. Please provide all details of the study methods.
- How were the EKGs interpreted? How many cardiologists have read the EKGs? How was the consensus reached on the diagnosis? Please describe in depth this methodology.
- I suppose that initially 500 patients were screen, but at the end 20 patients and 20 controls were enrolled. Please write this clearly.
- The description of the speckle tracking methodology and consequently the calculation of GLS is poor. How many segments (16 or 17) were evaluated? Number of echocardiographic windows, FR etc. should be reported as well.
- In general all the methods should be widely revised.

A table with baseline characteristics of the study population should be provided. The Table 1 is incomplete.
The analysis of the data according segments and views (A3C, A2C, A4C) is useless. I could suggest to re-analysed the data of the 3 groups fQRS (Anterior, lateral and inferior) with respect to the values of LS in the corresponding LV segments and coronary arteries.
Furthermore, could be an added value if the authors provided data on mechanical dispersion. In fact, fQRS is associated to abnormal and delay contractility.
The discussion is too long, so it needs to be shortened and modified according the revision process.

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