Reviewer’s report

Title: Assessment of Endothelial Function by Brachial Artery Flow Mediated Dilatation in Cardiac Syndrome X Patients

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Reviewer: ELISABETTA BIANCHINI

Reviewer's report:

This study aimed to assess endothelial function of cardiac syndrome X patients. For this purpose, brachial artery flow-mediated-dilation (FMD) and sublingual glycercyl trinitrate (GTN) responses were evaluated in 30 subjects and 30 controls.

Despite this manuscript addressed an interesting problem, it suffers several limitations (as reported in subsequent “Major Compulsory Revisions” section) and it should be considered for publication in “Cardiovascular Ultrasound” only after that major revisions will be correctly answered.

Major Compulsory Revisions:

1) The paper needs to be edited by an English-speaking technical writer.
2) Abstract: Conclusions are completely missing.
3) Introduction, paragraph 2: hypothesis about the link between endothelial dysfunction and CSX disease should be made clearer.
4) Methods, page 4, lines 13-16: the way brachial FMD and GTN responses were measured should be explained (was the measurement obtained on B-mode images or by doppler signal as declared in this paragraph?)
5) Methods, page 5, lines 3-5: was the probe hand-held? Was the measurement on ultrasound signal performed manually or automatically? Is the adopted method reliable?
6) Methods, page 5, lines 7: the authors declare that a second scan to compute FMD% was performed 90 s after the cuff deflation, but several studies have suggested that the maximal increase in diameter occurs approximately 60 s after release of the occlusive cuff [Corretti et Al. Guidelines for the ultrasound assessment of endothelial-dependent flow-mediated vasodilation of the brachial artery: a report of the International Brachial Artery Reactivity Task Force. J Am Coll Cardiol. 2002 Jan 16;39(2):257-65]. In addition, also measurements at the end of the examination should be recorded in order to show if the final diameter value is different from baseline. Please provide these data.
7) Results: data about diameter (D) values should be added: are there differences in D values between the two populations? what about the relationship of FMD% with D?
8) Discussion - not well structured and lacking in depth. Conclusions are
completely missing. Much more is needed in terms of interpretation of results.

**Level of interest:** An article of importance in its field

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests