Reviewer’s report

Title: The effect of cardiac shock wave therapy on myocardial function and perfusion in the randomized, triple-blind, sham-procedure controlled study

Version: 0 Date: 09 May 2019

Reviewer: Albert Varga

Reviewer's report:

The Authors of the present manuscript evaluated the capacity of cardiac shock wave therapy (CSWT) to reduce the objective signs of myocardial ischemia, that were determined by dobutamine stress echocardiography (DSE) and SPECT." They analyzed the data of 59 patients and concluded that: "Cardiac shock wave treatment showed the ability to reduce stress-induced myocardial ischemia, as assessed by wall motion abnormalities and perfusion defects, compared to sham procedure".

Interesting study. I have the following questions and remarks:

1. The Authors described in the Methods section that "patients diagnosed with angiography confirmed-CAD and exercise induced-angina associated with ST-segment depression ≥1 mm on treadmill electrocardiogram, and symptoms not controlled by optimal medical treatment, were enrolled in the study". Taking into account inclusion criteria defined above it is quite interesting that only 57% of the patients demonstrated ischemia during dobutamine echocardiography and 48% of the patients with SPECT (table 2.). Please, explain!

2. Furthermore, angina during dobutamine testing was more frequent the "wall motion positivity", which also needs some explanation (see: the ischemic cascade).

3. My third question regarding the testing results is the following: The Authors stated that "Majority of patients (78%) had multivessel disease and 96% were not candidates for further revascularization due to the extent and the severity of the disease or technical considerations". It is therefore surprising that in this population the average WMSI at the baseline testing was only 1.6. Please, give an explanation!

4. Only 5 patients demonstrated ischemia during dobutamine testing at the end of the study, however there was only marginal improvement in the WMSI.
5. The mechanisms how CSWT can decrease ischemia in the heart should be elaborated in a more detailed fashion in the discussion section. For instances, there are some papers in the literature bolstering this hypothesis (for instances, Zimpfer et al J Thorac Cardiovasc Surg. 2009;137:963-70)

Level of interest
Please indicate how interesting you found the manuscript:

An article of importance in its field

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments
which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal