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Evaluative Value of Apelin-12 in Acute Myocardial Infarction

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1 Original submission

4 comments · 18 Sep 2023 – 30 Sep 2023

Referee 1 Reviewer

MINOR REVISION 18 Sep 2023

Thank you for your email.

The paper seems to be suitable for publication. The authors need to add the center where the study was conducted and the year it was conducted to the method section.

Best regards,

Referee 2 Reviewer

ACCEPT 20 Sep 2023

Hi
This manuscript is accepted and can be published.

Associate Editor

MINOR REVISION 30 Sep 2023

Needs revision.

Editor-in-Chief

MINOR REVISION 30 Sep 2023

Please make the revisions as soon as possible.

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Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Revision notes

Firstly, we would like to thank the reviewers for appreciation of our work and the willingness to review our paper.

Please find below our response to the reviewer comments, as well as highlighted in the main text.

Reviewers' Comments:

Reviewer 1:
Thank you for your email.

The paper seems to be suitable for publication. The authors need to add the centre and the year the study was conducted in the method section.

We added the following sentence in order to fulfill this requirement.

In this dual-center prospective observational study, a total of ninety-eight patients were inclusively selected. These patients either presented themselves or were referred to the Coronary Care Unit of Dubrava University Hospital-Zagreb and the University Clinical Center of Kosova-Pristina during the one-year period spanning from March 2022 to March 2023.

Best regards,

Reviewer 2:
Abstract :
Please add the type of study and statistical methods to the work method
Add sampling type
There was a significant difference in the written results. Which difference is considered? The difference between which two groups? Statistical indicators should be reported.

In accordance with the suggestions, we added the following (highlighted) in the abstract section

Methods: In this prospective observational study, 98 patients were randomly included with the following criteria: chest pain lasting for more than 30 minutes, a 12-lead ECG with ST-segment elevation, rise of cardiac troponin I, and patients who have undergone primary percutaneous coronary intervention (PCI) within 12h. Blood samples were collected on the first day (early phase) and on the seventh day (late phase) after reperfusion therapy. Continuous variables were

expressed as mean ± standard deviation or median (range), while categorical variables were expressed as percentages. Comparison of variables was performed using Wilcoxon test, evaluation of variability of apelin values with Kruskal-Wallis test, while the degree of association and correlation between two variables with the Mann-Whitney test and Pearson correlation, respectively.

Results: On the first day of the early phase after MI, the median of the apelin-12 level was 2.73 (0.46-15.24), and on the seventh day 2.32 (0.25-10.89). The difference of Apelin-12 values on the first day and on the seventh day after MI was statistically significant (Wilcoxon test) ($p=0.003$). With Kruskal-Wallis test, variability in apelin values was analyzed on the first day relative to segmental wall motion abnormalities ($p=0.043$) and on the seventh day relative to number of coronary stenosis ($p<0.001$). The Mann-Whitney test of the post PCI final thrombolysis in MI (TIMI) flow grade (patients without reperfusion injury with TIMI 3 and in patients with reperfusion injury with TIMI ≤ 2) and the apelin-12 levels during the early phase of MI revealed a statistically significant difference ($p=0.002$).

Main body:

Sampling method should be added. Add the type of study.

We included 98 patients. This sample was analyzed on day 1 and day 7. This was explained by the following:

Data regarding patient characteristics, medical history, and current medications were obtained from hospital ward and emergency department admission using a standardized questionnaire. Blood samples were collected on the first day (early phase) and on the seventh day (late phase) after reperfusion therapy; the serum was obtained by allowing the blood to solidify in a serum tube for 30 min, after centrifugation (2000 rpm, 15 minutes) serum samples were stored at -80°C to prevent degradation. Apelin was measured using the apelin-12 microplate ELISA assay kit (Phoenix Pharmaceuticals, Inc) according to the manufacturer's instructions. Blood samples for the measurement of routine laboratory parameters were also collected at admission. Patients who underwent analysis on both day one and day seven were the ones taken into consideration.

The study was approved by the institutional ethics committee of Dubrava University Hospital-Zagreb and University Clinical Center of Kosova-Pristina. Informed consent was obtained from all individuals participating in the study.

Statistical analysis

The clinical endpoint was the apelin value in the early (98 patients) and late phase (98 patients) of myocardial infarction confirming the effect of apelin/APJ in patients with myocardial infarction. Continuous variables were expressed as mean ± standard deviation or median (range), while categorical variables were expressed as percentages. Continuous variables were compared with the Wilcoxon test (paired samples) with a prespecified statistical significance of $p<0.001$. The Kruskal-Wallis test was used to evaluate the variability of apelin values on the first day based on segmental wall motion abnormalities (SWMAs) and apelin values on the seventh day based on different numbers of stenotic coronary arteries. The degree of association and correlation between two variables was analyzed with the Mann-Whitney test and Pearson correlation, respectively. All statistical analyses were performed using SPSS statistics version 22.

We added the type of study (find highlighted).

In this dual-center prospective observational study, a total of ninety-eight patients were inclusively selected.

In Table 1. Write the sample size in each category. Was there enough sample size in each category?

There were 98 patients in each category

Reviewer 3:

Hi

This manuscript is accepted and can be published

Thank you for your approval.

We believe that your comments enriched our manuscript.

We hope the changes we've made will be sufficient for our paper to be accepted.

Sincerely,

2 Revision 1

2 comments · 8 Nov 2023 – 8 Nov 2023

Associate Editor

MAJOR REVISION 8 Nov 2023

Please make the revisions.

Editor-in-Chief

MAJOR REVISION 8 Nov 2023

major revision