Author’s response to reviews

Title: Long-term follow-up in adults after tetralogy of Fallot repair.

Authors:

Natalia Dłużniewska (ndluzniewska@gmail.com)
Piotr Podolec (pp@interia.pl)
Maciej Skubera (mskubera@gmail.com)
Monika Smaś-Suska (monikasmas@gmail.com)
Jacek Pąjak (jacekpajak@poczta.onet.pl)
Małgorzata Urbańczyk-Zawadzka (m.urbanczyk@szpitaljp2.krakow.pl)
Wojciech Płazak (wojciech.plazak@uj.edu.pl)
Maria Olszowska (molszowska@interia.pl)
Lidia Tomkiewicz-Pajak (ltom@wp.pl)

Version: 1 Date: 11 Sep 2018

Author’s response to reviews:

Dear reviewers,

Thank you for reviewing our manuscript entitled “Long-term follow-up in adults after tetralogy of Fallot repair.”

During revising the paper, we considered yours’ comments carefully.

We hope the presented paper would be approved for publication in Cardiovascular Ultrasound.

Specific response for comments from the editors and reviewers:

Reviewer #1:

In this study, the authors evaluate the late follow-up of repaired Tetralogy of Fallot. They focused their study in the population, which was not re-operated yet. The topic is of interest however, the study present many limitations and some, majors and minors, comments have to be addressed.
1. Abstract: In echocardiography ejection fraction of the right ventricle (RV), measured in CMR, negatively correlated with RV diameter measured in echocardiography (r=-0.31; p=0.01; r=-0.38; p=0.003; r=-0.29; p=0.02, respectively). I think that there is a mistake in the sentence In echocardiography ejection fraction of the right ventricle (RV), measured in CMR moreover the correlation between the RVEF and RV diameters did not add any useful information to the manuscript.

Answer: Thank you very much for the comment. We made a correction according to the suggestion and do not put the information about correlations between ejection fraction of the right ventricle (RV), measured in CMR and RV diameters measured in echocardiography to the manuscript.

2. Method section

Population study: the authors enrolled retrospectively patients from the outpatients registry or from CMR population? It is important to precise to understand the selection bias.

Answer: We enrolled retrospectively consecutive patients from the outpatients registry.

3. The electrocardiographic (ECG), cardiopulmonary exercise testing (CPET), echocardiographic and cardiac magnetic resonance (CMR) data for all the patients were reviewed retrospectively. Assessment of ECG, CPET, echocardiography and CMR were reviewed in patients who did not undergo pulmonary valve replacement. What did the authors mean in the second sentence? they already stated in the first one that they review the data in all patients?

Answer: The electrocardiographic (ECG), cardiopulmonary exercise testing (CPET), echocardiographic and cardiac magnetic resonance (CMR) data for the patients who did not undergo pulmonary valve replacement were reviewed retrospectively and we analysed only the group who did not had reintervention.

4. Echocardiography: Please review the references 13: is no guideline

Answer: Thank you very much for the comment. We made a correction in reference list.

5. Results

The mean patients age of initial operation was 5.3±6.2 years, instead of initial operation I suggest intracardiac repair, as the distribution of the age at repair is probably not normal, I suggest to report the median and IQ or median and range.

Answer: Thank you for the comment. According to the suggestion we put the age of intracardiac repair and we reported the age of intracardiac repair as the median and range.
6. To the further analysis 83 patients (76%) who did not undergo PVR were included. Did any patient of this population have the criterias for reintervention at the time of the study?

Answer: We only analysed the group who did not undergo pulmonary valve replacement and none of the patients of this population had the criteria for reintervention at the time of the study.

7. In the reoperated patients population the data reported are referred to before reintervention of after.

Answer: We only analysed the group who did not undergo pulmonary valve replacement and the patients of this population were included consecutively from the register. We did not analyzed the reoperated patients population.

8. Table1: some parameters are missing, type of intracardiac repair, previous shunt, NYHA,

Answer: Thank you for the comment. We described parameter as NYHA class in manuscript text, but according to the reviewer suggestion we added missing parameters to the table number 1.

9. The patients with less than 25 years since the repair had significantly larger right and left atria than did the patients operated before that time. I think there is a mistake , from the table patients less that 25 years have a smaller atria

Answer: Thank you for the remark. We corrected the mistake in the manuscript text.

10. Among all the patients, ejection fraction of the right ventricle, measured in CMR, negatively correlated with right ventricle diameter measured in echocardiography (r=-0.31; p=0.01; r=-0.38; p=0.003; r=-0.29; p=0.02, Also, end-diastolic volume of the right ventricle and pulmonary regurgitant volume positively correlated with right ventricle outflow tract diameter (r=0.54; p<0.001) and (r=0.53; p=0.005). I 'am not sure that those correlations are useful for the aim of the study, what did thoses informations add, It’s well established that pulmonary regurgitation correlate with RV volumes.

Answer: Thank you very much for the comment. We made a correction according to the suggestion and do not put the information about correlations between ejection fraction of the right ventricle (RV), measured in CMR and RV diameters measured in echocardiography to the manuscript.

11. Table 3
TV gradient max is very small Is it the velocity? – Answer: We mean maximal TV gradient in mmHg.

LVD are smaller that LVS, please correct – Answer: we corrected the mistake.

What do you mean by RVD2 and RVD3 – Answer: we mean measures of right ventricle in 4 chambers projection in echocardiography and we added the abbreviation and the end of the table 3.

12. Table 4:

LVD in CMR is not useful

I suggest to report indexed LV volumes and mass, and also indexed RV systolic volumes and mass

Answer: Thank you for the your comment. According to the reviewer suggestion we reported indexed LV volumes and mass, and also indexed RV systolic volumes and mass.

13. It's interesting to note that despite a mean severe pulmonary regurgitation the mean RV volumes is almost normal, did the authors know how many patients have a restrictive RV physiology,

Answer: We did not know how many patients have a restrictive right ventricle physiology but in the further studies we are planning to analyzed it.

14. Ventricular tachycardia and the need to use beta blocker medications were significantly more frequent in patients who were <25 years since the repair as compared to operated later (13 vs 70; p=0.002 and 40 vs 43; p=0.003, respectively). In the figure 2, is the opposite.

Answer: We corrected the mistake in the manuscript text.

15. In our cohort, exercise performance in both groups did not have significant differences in rates of reoperation. age of reoperation? what do you mean, which data support this?

Answer: We mean that in our cohort, exercise performance in both groups did not have significant differences in regard to time since intracardiac operation. In previous studies exercise capacity was compared to heathy controls and not between groups of patients with different time from intervention.
16. A limitation paragraph is needed listing the limitation and bias of the study (retrospective, small sample, selection bias ad so non), moreover this is not a follow-up study but a cross sectional one, as the parameters and, I presume, also the history of adverse event was collected at the time of patient enrollment.

Answer: Thank you for the comment. According to the reviewer suggestion we added a limitation paragraph. The limitation of the study that we mentioned is: retrospective, small sample, selection bias ad so non. Moreover this is a cross sectional study and the parameters and the history of adverse event was collected at the time of patient enrollment.