**Author's response to reviews**

**Title:** Preoperative single ventricle function determines early outcome after second-stage palliation of single ventricle heart.

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Reviewer reports:

Reviewer #1: General considerations: in this retrospective study Pjak et al evaluate the postoperative outcome after II stage palliation achieved by Hemi-Fontan or bidrectional Glenn in single ventricle patients. They investigate if one of those surgical technique is associated with higher post-operative adverse outcome and the second aim was to identify preoperative predictors for early adverse outcome in this population. From their data pre-operative ventricular dysfunction (a known risk factor) was associated with a higher post-op mortality.

Major limitation:

why the authors evaluated only the mortality and not others adverse outcome as LOS; duration of mechanical ventilation.

Authors(s) response: LOS and mechanical ventilation were compared in the table No. 1 as intubation (days) and hospitalization (days), and are mentioned in the Results text (lines 168-9).
I don't understand which parameters were tested in the univariate analysis (table 3 cited is not reported)

Author(s) response: Unfortunately, Table no 3, where analyzed parameters are demonstrated, was not attached to the manuscript. This has been corrected.

Did you test the ventricular type, the diagnosis, age at procedure?

There is no information about the pulmonary arteries, an important risk factor in single ventricle physiology?

Author(s) response: We evaluated all parameters, including type of single ventricle, as reported in Table 1 (corrected). To determine factors affecting postoperative mortality rates, we took only clinical data irrespective of the diagnosis (Table 3).

All patients were qualified for stage II on the base of ECHO examination. In some examinations, it was impossible to visualize the size of all pulmonary arteries, so, unfortunately, we could not include this important parameter in our analysis (addressed in the limitations section, lines 293-6).

Minor comments:

- State in the limitations section that the ventricular function was evaluated semi-quantitatively

Author(s) response: We have stated this in the limitations section (Lines 293)

-Surgical technique: any patient the tricuspid valve surgery was associated to the surgical procedure?

Author(s) response: No patient had a surgical correction because of insufficient tricuspid valve (Lines 152-3).

-The result section is very confusing please divide in paragraphs

Author(s) response: The Results section has been rewritten and re-organized.

-Patients’ characteristics are reported in the texts, I suggest rather to insert them and differences between groups in a table, Characterize better your population for instance the type of the single ventricle, type of first stage..

Author(s) response: Most patients’ characteristics have been removed from the text and reported in Table 1 and Table 2.

-In Group I, 4 (17%) children died. Three (75%) demonstrated significant atrioventricular valve regurgitation: before operation or after?
Author(s) response: In Group I, 4 (17%) children died. Three (75%) had significant atrioventricular valve regurgitation before and after operation (Please see lines 202-11).

We have taken all the minor comments into consideration and corrected them, as marked in the text in yellow.

Reviewer #2: The manuscript is of interest.

There are some limitations. The results are those expected on the basis of the literature. Both unbalanced atrioventricular (AV) septal defect and AV valve hemodynamically significant regurgitation are well known parameters related to a worse prognosis. An improvement of results after surgical valvuloplasty has been reported by other Centres (a comment on this point should be provided).

The prognostic negative value of ventricular dysfunction is also expected. This was an independent predictor for the Authors.

The comparison between the two different surgical techniques (which do not impact on the final results) is limited by the small numbers, the different age at repair and the slight diverse proportion of hypoplastic left ventricle in the two groups.

Minor remarks:

- Too many abbreviations should be avoided, to make reading easier

Author(s) response: We have removed most abbreviations.

- Results, line 8: the sentence is not that clear. HLHS was present in 13 children in group I (56.5%) and 23 in group II (62%)

Author(s) response: In the first paragraph of the Results section, the sentence concerned with percentage of HLHS diagnosis, has been removed from the text. Information of the patient’s diagnosis has been added to Table no 1.

Our manuscript has been reviewed and edited by International Medical Editing Service, LLC, Denver CO, USA.