Author's response to reviews

Title: Aortic distensibility and coronary artery bypass graft patency

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Author's response to reviews: see over
Dear Editor;

Thanks for the detailed review. The comments about the manuscript and the confusing data made us to re-check the all the study data. In the analysis we realised a data input and coding error. We checked all the cases data in individual basis and made the statistical analysis again. The corrected data showed that the previously mentioned comments for the pulse pressure of 70 mmHg are not valid any more.

We answered the comments of the viewer and according to his suggestions made the following changes. For ease of reading the questions raised from the reviewer are highlighted in gray. The newly added section are highlighted in yellow in the manuscript and this document.

1. In the section of the Results there is confusion in the value of the aortic pulse pressure. Is it higher or lower than 70mmHg the number which can indicate more graft occlusion? Later on in the manuscript the value is more than 70mmHg and at the end looks to be again less than 70mmHg on the dragging of the conclusions! It can be an orthographic error but when we dragging conclusions we have to be accurate in a study. Studies from Cay et al showed that a higher aortic pulse pressure correlates with higher saphenous stenosis. In his study had 126 patients and the cut-off point was 50mmHg.

   Answer: We checked the data again and realised that such a difference does not exist infact. We also added an analysis for a cut-off value of 50 mmHg. Accordingly we added to the abstract/results section: We also evaluated the data for cut-off values of 50 and 70 mmHg of pulse pressure and did not see any significant difference between the groups in terms of saphenous or LIMA grafts.

   We also in the methods section added the following sentence: A cut-off point for pulse pressure of 50 mmHg was also used for statistical analysis about the patency rates of LIMA and saphenous grafts and there was no statistically significant difference between the groups (p>0.05) (Figure 3-a). We divided the cases into groups as having aortic pulse pressure lower and higher than 70 mmHg and then checked for patency rates of saphenous and LIMA grafts. This analysis also did not reveal a statistically significant difference between the groups (p>0.05) (Figure 3-b).

   In the discussion section the following sentences were added: In contrast to Cay et al., the saphenous graft patency rates were similar in cases with aortic pulse pressure lower than 50 mmHg compared to cases with pressures 50 mmHg or above in our study. In his study there was 126 patients and also the cut-off point was 50 mmHg for aortic pulse pressure. Our results are reflective of late term results for coronary saphenous grafts.

2. At the method section:
   a. Time period of the study of the patients (from when till when?)
   b. Ethical approval for the study?

   We added the following section

   After Approval from the Research Ethics Committee of Medical Faculty of Uludağ University, we included CABG cases that had coronary angiography between 07 October 2007-07 October 2008.
c. No demographic data of the patients with detailed parameter analysis and statistical significance and statistical comparison of their variables (continuous and categorical).

The patient characteristics according to saphenous graft patency results are given in Table 2.

d. Scientific justification from the authors of why they choose this method of measuring the aortic pulse pressure and the distensibility. As the study is retrospective will have bias in the interpretation of the results which can affect the conclusions.

We added the following sentence to the methods section:

The reason we used the invasive method for calculation of aortic distensibility was being a gold standard technique and being more easy by enabling us to assess coronary vasculature and distensibility parameters in the same session. Also we think we addressed the use of this nearly forgotten invasive method by cardiologist. Without using echocardiography we can obtain data from the readily derived images during ventriculography and hemodynamic measurements. This also will increase patient compliance for future studies.

e. Better explanation from the authors of the usage of the chi-square test and of the Mann Whitney test.

We added the following sentences: **Ki-Square Test was used for classified variables and Mann-Whitney U test for comparison of the means. The statistical analyses were performed by use of SPSS data Manager Software system. Statistical significance was assumed in case of a p value <0.05**.

At the Results section:

a. Data explained in the text needs to been correlate with a better table to facilitate interpretation of the results. How the text is been written creates confusion to the reader as not well constructed.

b. Reading the number of patients who had veins or arterial grafts creates confusion with the data given as it looks that 84% of the patients had LIMA to LAD, however in the results the authors report the use of SVG to LAD in 23 patients which is 43.3 % !! There must be a mistake of calculations here. In the table below you will see what the authors reported like numbers of use of grafts in the reported number of 53 patients.

<table>
<thead>
<tr>
<th>AORTA (SVG)</th>
<th>LAD 23</th>
</tr>
</thead>
<tbody>
<tr>
<td>AORTA (SVG) CX 38</td>
<td></td>
</tr>
<tr>
<td>AORTA (SVG) RCA 27</td>
<td></td>
</tr>
<tr>
<td>LIMA LAD 45</td>
<td></td>
</tr>
</tbody>
</table>

The numbers above are not correlating the total number of patients. Are the authors mean that these numbers respecting the total SVG grafts for each territory or what? The authors need to clarify the numbers if they respect number of patients or number of grafts.

Even if this is correct, why so high use of NOT LIMA (23 patients). Any explanation of why the LIMA has not been used? This can affect long term patient survival, and as we know from other studies the LIMA graft is not affected by the Ao Pressure (Aida et al ).
c. The section of the aortic distensibility and pulse pressure is correct written except of the figure which has been labelled wrong.

We analysed the data and all data regarding this issue are corrected and highlighted in yellow in the text.

Best Regards
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