

Dear Editor,

Please find enclosed our revised manuscript and our answers to reviewers

Thank you for your collaboration

Kind Regards

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Reviewer 1.

1. As the authors commented in the “Limitation” section, there seems to be the patients selection bias. Nevertheless, the authors should show the method of patient selection in the “Method” section. In addition, the authors had better mention that the selection of IMA differed annually.

BIMA grafting is a surgical strategy used in daily practice (including patients with left ventricular dysfunction) in our center since more than 20 years by all operators. Thereby, the proportion of BIMA and LIMA-SVG grafting didn't significant vary according to period of inclusion in our study.

The paragraph material and methods has been modified and the following sentence has been added (page 6 lines 8-10):

“Surgical technique

Our selection of patients for LIMA-SVG and BIMA grafting was not random but was influenced by the heart team decision and was decided from the in situ graft size.”

2. The medications after CABG is an important treatment. The authors had better showed the contents of medication after CABG, at least, at the discharge.

We agree with the reviewer and we added the following paragraph in Results: page 10 lines 10-17

“The evidence-based medical postoperative treatment didn't significantly differ between LIMA-SVG group and BIMA group: statin therapy (88.3% vs 94.7%, $p=0.4$), beta blockers (77.1% vs 82.0%,

p=0.4), angiotensin-converting enzyme inhibitor (84.3% vs 88.6%, p=0.6) and aspirin (90.5% vs 94.7%, p=0.7). During the follow up, 18 patients received an implantable cardiac defibrillator without significant difference between two groups”.

3. I have experienced the patients whose bypass was occluded in the early phase after CABG. If the authors confirmed the patency of bypass before the discharge, they had better show such data

We agree that such data could be interesting but systematic screening of the bypass patency by angiography or more recently by CT scan before the discharge was not performed in daily practice in our center as most of surgical centers.

Reviewer 2

1. There is a significance in age, hypercholesterinaemia, in the unmatched group and not different in the score matched group. Here it needs more discussion in the manuscript

The following sentence has been added:

Patients who received LIMA-SVG grafting were significantly older than BIMA group (64 ± 9 years vs 58.5 ± 10 , p=0.01), with more frequent dyslipidemia (59.6% vs 69.6%, p=0.04) and trend for a more frequent peripheral artery disease (42.2% vs 33.1%, p=0.07).

We used a propensity score (PS) matching which is a method used to balance observed covariates in two treatment strategies. We added in results the following sentence: page 11

We performed 1:1 propensity score matching to select patients receiving BIMA or LIMA SVG group with comparable preoperative characteristics

2. In table 2 : there is a significance of ventilation time, vasopressor use and transfusion.

We added page 9 lines 25-26

Early results

The older age of patients and worse initial clinical status in LIMA group influenced the post-operative period with longer ventilation time, higher vasopressor use and transfusion

3. As this is a high risk cohort some data regarding ICD-implantation in the follow-up period would be useful As drug treatment of heart failure is very important for mortality data is needed regarding the drug treatment in both groups (betablockers, ARBs, spironolactone, antiarrhythmics)

The following sentences have been added: Page 10 lines 10-15

“The evidence-based medical postoperative treatment didn’t significantly differ between LIMA-SVG group and BIMA group: statin therapy (88.3% vs 94.7%, $p=0.4$), beta blockers (77.1% vs 82.0%, $p=0.4$), angiotensin-converting enzyme inhibitor (84.3% vs 88.6%, $p=0.6$) and aspirin (90.5% vs 94.7%, $p=0.7$). During the follow up, 18 patients received an implantable cardiac defibrillator without significant difference between two groups.”

4. Figure 1: This figure is a little confusing, as matched and not-matched cohort are presented in one figure. Here only the use of the data of the machted cohort would more strengthen the message of the manuscript and the significance of the data in the not matched cohort needs to be more specific discussed

We agree with the reviewer and we decided to keep only a KM overall survival analysis in unmatched cohorts. We mean that this information and the difference observed in two cohorts are interesting. Then, the figure 2 has been modified because this figure was a little confusing and we presented more homogenous results on overall and even free survival after propensity score matching.

Reviewer 3.

We apologize for the statistical analysis redaction which introduced some imprecise. Thus, the statistical analysis paragraph has been completely reformulated: pages 7 and 8

Moreover, the figure 2 is a little confusing: unmatched cohort and propensity score matched cohort were presented in the same figure. The only use of propensity score matched cohort would more strengthen the message of the manuscript.

We agree with the reviewer that the practical relevance of the findings needs to be considered with due considerations for estimation uncertainty. A results presentation including 95% confidence intervals would facilitate this

We modified page 10 and the following sentence has been added: “but this significant difference became insignificant after multivariate adjustment hazard ratio (HR) (95% confidence interval CI) 1.02 (0.68-1.56), $p=0.8$, the others results in this observational study didn’t need such modification

Others corrections have been made:

“Real world” has been removed and “daily practice” has been added: Coretip page 4

We added page 9 and 10: “The analysis of in-hospital course showed that all-cause mortality (7.8% vs. 10.3%, $p=0.49$) and early postoperative morbidity including myocardial infarction (4.2% vs. 3.8%, $p=0.80$), stroke (1.2% vs. 3.8%, $p=0.14$), and digestive ischemia (1.8% vs. 1.9%, $p=0.94$) **were not significantly different between two groups**”.

The following sentence has been removed: “The follow up was not long enough to establish a significant difference between the two surgical strategies”