Early Intrahospital Results Of Coronary Revascularization Using Bima Composite "y" Grafts Versus Other Surgical Revascularization Techniques

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Background

Several studies has shown better long-term mortality using bilateral mammary arteries (BIMA) in coronary artery bypass grafting (CABG). Concern was raised that use of BIMA grafting is technically more demanding and could increase surgery time as well risk of sternal wound infection. There has still been debate of BIMA technical aspects to achieve full myocardial revascularization.

Methods

This is a retrospective single center study where we analyzed intraoperative and pre-discharge data between two revascularization techniques. In the BIMA group all patients, elective and urgent, who underwent CABG using BIMA in Y configuration as the only graft material (BIMA Y) were included. In the second group all comers in 2018 who underwent other configurations of CABG (other CABG) were included.

Results

There were 61 patients included in the BIMA Y group and 157 patients in the other CABG group. In the BIMA Y group there were fewer female patients - 23% compared to other CABG group - 37% (p = 0,049) and less diabetic patients (16% *vs* 29% ,p = 0,048). We observed no significant changes in total aortic cross-clamp time (BIMA Y *vs* other CABG; 63,44 ±19,28 min and 60,07±20,38 min, p = 0,96), but CPB time was shorter in the BIMA Y group (76,57±23,49 min *vs* 81,86±29,34 min). In both groups similar amount of coronary anastomosis were done (BIMA Y *vs* other CABG; 3,05±0,8 and 3,13±0,76; p = 0,11) to achieve complete revascularization, but the mean total operation time was slightly higher in BIMA Y group (218,20±40,45 min and 176,67±52,60 min). There were no significant difference in deep wound infection rate (BIMA Y *vs* other CABG; 7% *vs* 5% , p = 0,56), neither in postoperative stay (10,02±6,90 days *vs* 9,99±6,32 days , p = 0,96).

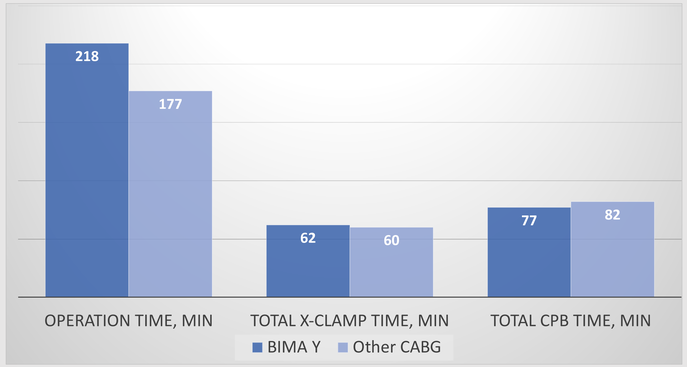


Figure1. Comprasion of operational times, total c cross-clamp times and cardiopulmonary bypass times between BIMA and other CABG groups.

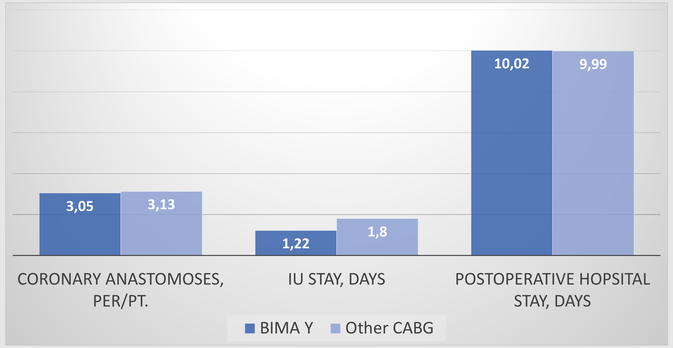


Figure 2. Comparison of coronary anastamoses per patient, ICU stay and posoperative hospital stay between BIMA and other CABG groups.

Conclusions

- With using BIMA in Y configuration it is possible to achieve full revascularization with no increase in aortic cross-clamp time, total CPB time and with slightly longer total operative time.
- Our study has not shown a higher rate of deep wound infection or prolonged postoperative stay using BIMA in Y technique.