heterogeneity of definitions of high-risk patients, to whom are applied liberal criteria dictated by experience and which are not considered conventionally accepted prognostic factors in the EuroSCORE. Recently, Etienne et al. demonstrated that preoperative IABP support associated with off-pump operations was effective in reducing hospital mortality compared with EuroSCORE-predicted mortality [13].

Our patients undergoing off-pump CABG who received prophylactic IABP had no complication and no conversion to CABG procedure was necessary. In order to prevent hemodynamic instability in off-pump CABG, Suzuki et al. reported favorable results in patients with left main coronary artery disease, unstable angina, left ventricular dysfunction and congestive heart failure requiring medical treatment [14]. Regarding the timing of preoperative insertion, we inserted IABP two hours before operation in all cases. Christenson and colleagues did not find any difference in outcome whether the IABP is inserted 2, 12, 24 h preoperatively [11]. In the Benchmark counterpulsation outcomes registry, the percentage of IABP-related mortality was 0.053%, major limb ischemia was 0.9% and severe bleeding was 0.9% [15]. We had no IABP-related mortality or morbidity.

There are some limitations to our study. Firstly, the small sample size and the nature of retrospective design. Propensity score is simply a method for reducing bias in observational studies when randomization to treatment groups is not possible. The adjustment with propensity scoring was limited by available variables, which underlines the fact that selection bias could not be completely eliminated. Secondly, in the selection of high-risk patients, unstable angina refractory to medical therapy is at borders between elective and urgent operation.

In conclusion, prophylactic IABP treatment for hemodynamically stable high-risk patients undergoing CABG is safe, reduces LCOS, improves postoperative course showing a trend of survival advantage.

References


eComment: Re: Prophylactic intra-aortic balloon pump in high-risk patients undergoing coronary artery bypass grafting: a propensity score analysis

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Intra-aortic balloon pump (IABP) application in postcardiomyopathy heart failure prevention before and after surgery is a well-known method. Even though, a huge worldwide experience of this procedure is already collected this study is still relevant [1]. According to the experience of leading cardiac surgical hospitals IABP preventive administration significantly decreases the danger of postcardiomyopathy heart failure appearance. Therefore, early stabilization of hemodynamic parameters in high-risk patients after cardiopulmonary bypass grafting allows shortening of the in-hospital stay time. This fact was also approved by results of another study [1]. IABP introduction during surgery or during early postoperative period has no positive impact on the patient’s hemodynamics and does not diminish the risk of post-surgical myocardial infarction development. This leads to increasing in-hospital stay time.

We want to congratulate the team of authors on achieving good results in their study. These results could help to improve clinical results in the future and allow a more rational and efficient use of IABP.
References

