Reply to the Letter to the Editor

Reply to Velissaris et al.

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We appreciate the comments of Mr Velissaris on our paper about hemodynamic changes during off-pump coronary artery bypass (OPCAB) surgery. We agree on the fact that thermodilution cardiac output catheters (TCOC) are suboptimal means to look at homodynamic changes. Assessing hemodynamics during off-pump surgery is not an easy task. In several specific moments during off-pump coronary grafting, hemodynamic parameters are susceptible to be affected. These occur during myocardial mobilization, stabilizer application, blood flow interruption if no endoluminal shunts are used, and finally at the end of the period of ischemia. We chose to assess these parameters before mobilization and at the end of the period of ischemia since this is where the maximal variations are expected. The delay between the positioning and the termination of the anastomosis is generally longer than 10 min. It is likely then that TCOC must have recorded hemodynamic parameters quite representative of the reality. We did try on two occasions the epiaortic ultrasonic probe, but we find it cumbersome to install and potentially harmful for the pulmonary artery during the verticalization of the heart. We believe that with experience this could be overcome.

We achieve relatively good preservation of the cardiac index during grafting of the marginal artery and we strongly believe this is in relation with the technique of mobilization that we used. Very early in our experience we developed a full mobilization of the posterior wall with four pericardial traction sutures anchored very closely to the pericardial reflection (less than 1 cm from the base of the heart). We applied this technique systematically on every case. It allows the verticalization of the apex without creating ventricular distortion contrary to using the apex suction whereby the maximal stress is put on the ventricular wall during mobilization. We believe that the latter is more susceptible to increase ventricular dysfunction especially in patients with already poor ejection fraction. Then with a gentle application of the stabilizer, hemodynamics can be maintained. Of course, a restrictive diastolic disease of the right ventricle is artificially created during this maneuver susceptible to impede the venous return. This is why Trendelenburg positioning as well as α-agonists are necessary in increasing the venous hydrostatic pressure and re-establishing the ventricular preload. Unfortunately, in this series, we did not assess the tricuspid valve by trans-esophageal echocardiography.

We agree that real-time cardiac output monitoring is the most promising technique for dynamic evaluation of hemodynamic changes during OPCAB surgery. We look forward to learning more about it.

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Letter to the Editor

Double outlet right ventricle

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Lacour-Gayet and his colleagues [1] are to be congratulated on their excellent account of this lesion co-existing with non-committed ventricular septal defect. Dr Lacour-Gayet has kindly acknowledged Becker and myself for the reproduction of Fig. 1. He acknowledges Freedom and Yoo, however, for permission to publish Fig. 2. Unless I am very much mistaken, this picture shows specimen 153 from Children’s Hospital of Pittsburgh. The original photograph, taken together with Dr James R. Zuberbuhler, is in my files. I realize that, when Freedom and Yoo reproduced the illustration in Ref. 16 as cited by Lacour-Gayet et al., they neglected to state the original source of the photograph. Dr Freedom now agrees with us, however, that we should establish the correct attribution of this figure.

References


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