ence (and intuition) when predicting the effect of revascularization on perfusion, symptoms, and possible improvement of left ventricular contractile function. The decision of surgery, the grafting-strategy, and the outcome may be significantly improved if the interpretation of angiographic information could be based on functional assessment of ischemia. It appears that improvement in angina is directly related to improvement in perfusion following angioplasty or CABG [15]. Future studies should elucidate the potential benefits of more tailored surgical revascularization, not only on tissue perfusion per se, but also on outcome in terms of alleviation of angina and, importantly, improvement of left ventricular function.

5. Conclusion

This kind of evaluation raises the question of whether it is sufficient to base the diagnostic set-up of patients scheduled for CABG on history and CA alone. Our findings call for future studies evaluating the potential benefits of additional preoperative physiological measurements as adjuncts to CA.

Acknowledgments

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References


ICVTS on-line discussion A

Title: Anatomofunctional information is obligatory for CAD patients
Authors: Leo A. Bockerta, Bokoulev Center for Cardiovascular Surgery, Moscow 121552, Russia; Ilia Berishvili
doi:10.1510/icvts.2008.149914A
eComment: This is a very interesting paper [1]. As the authors point out when shifts occurred, no matter in which direction, it resulted in a decreased patency rate of inserted graft. Additionally, a discrepancy between the preoperatively planned grafting strategy based on coronary angiography and the actual number of grafts inserted is more actual today, when the population of patients referred for coronary artery bypass grafting (CABG), is changing.

The progress in medical therapy and interventional cardiology coupled with the increase in life expectancy and the widespread availability of cardiac surgery facilities have shifted toward the high risk profile of patients proposed for surgical myocardial revascularization. Also, there is clear evidence that the cardiac and systemic preoperative status of CABG patients has become progressively more complex and those high risk patients now represent a substantial proportion of surgical candidates. In these high risk patients, often with occluded coronary arteries, the standard concepts, criteria, and technique of surgical myocardial revascularization often produce poor results and lead to occlusion of grafts with significant mortality and morbidity rates.

In the context of the above-mentioned we, first of all, think that in the cases with occluded coronary arteries and especially with poor distal bed, elaboration of TMR in addition to CABG will do much good to prevent grafts thrombosis. According to our experience (and we have experience not of 20 and not of 100 such operations – but we have performed 500 such procedures) mortality does not increase because of this additional (TMR) procedure. (It is below 1 %).

In the second place, we agree with the authors that the decision of surgery, the grafting-strategy, and the outcome may be significantly improved if the interpretation of angiographic information could be based on functional assessment of ischemia. It appears that improvement in angina is directly related to improvement in perfusion following angioplasty or CABG.

A patient appeals to the hospital not for surgery but to relieve the symptoms he is suffering from. To remove angina we should improve myocardial perfusion and broadly speaking we believe that to plan operations without those myocardial segments with decreased perfusion is an anachronism.
We have developed an adequate anatomofunctional diagram to implement individual surgical schedule. According to the diagram the individual angiogram of a patient is placed on the polar scintigram. This allows us to develop an adequate, unchanging intraoperative treatment strategy and make myocardial revascularization more complete by elaborating grafting of coronary arteries with normal coronary bed and TMR in the area of reversible ischemia not amenable to bypass because of diffuse disease. Closure risk of such grafts is minimal since, as our experience demonstrates, TMR produces vasodilatation just on the operating table. This increases the patency of the grafts at the critical step of the surgery – during the first hours following suturing the grafts.

Reference


ICVTS on-line discussion A1

Title: Additional TMR procedure

Author: Rozy Eckardt, Sdr Boulevard 29, Odense 5000, Denmark
doi:10.1510/icvts.2006.149914A1

eResponse: Thank you for your comment on: Frequent change of procedure during coronary artery bypass surgery suggests insufficient preoperative diagnostic strategy [1]. It is interesting that you perform revascularization with additional TMR procedure in such a large number. TMR is not used in our department: it is generally believed that neither symptoms nor survival are convincingly improved by the TMR procedure.

Reference