

MIDCAB — an excellent option for patients with single vessel disease

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In their interesting paper, the authors [1] present a substantial number (235) of elderly patients, all aged 70 and over, who were operated upon between 1999 and 2007 in their institution using the minimally invasive coronary artery bypass grafting (MIDCAB) technique. Their paper also reveals that during the same period 463 patients under

the age of 70 underwent MIDCAB. This adds up to an astonishing total of 698 MIDCAB procedures.

Unfortunately, the authors do not tell us the total number of surgical revascularisations performed in their institution over this period, but I believe that the percentage of MIDCAB procedures must have been significantly high.

We all know that, especially at a time of rapidly developing techniques of percutaneous coronary intervention, it is difficult to gather a large group of patients suitable only for left anterior descending coronary artery revascularisation. The reader finds in the paper the answer as to how the authors collected such a large group: most of the patients had multi-vessel disease. It should be noted that of the group of 235 patients, only 74 (31.4%) patients with single vessel disease underwent complete revascularisation, and 161 (68.6%) patients underwent incomplete revascularisation! So in two out of every three cases, the surgeons decided to qualify the patients to MIDCAB procedures to avoid a sternotomy and its consequences.

It is difficult to agree with such a method of qualification. Many authors have presented papers showing the same early mortality results after MIDCAB as after off-pump coronary artery bypass (OPCAB) procedures. And, during an OPCAB procedure, the surgeon has access to all coronary arteries. It must be emphasised that incomplete revascularisation is a well known factor of higher mortality in patients after CABG. In fact, the authors confirmed this finding in their paper. The

Kaplan-Meier analysis revealed that multi-vessel disease was an independent factor of late mortality. Which is why, in our department, we qualify most patients with multi-vessel disease for an OPCAB procedure.

We need to comment on the surgical techniques presented in the paper. Firstly, it should be noted that, according to the authors, left internal mammary artery (LIMA) was harvested in all cases under direct vision. There are many ways of harvesting the artery with the use of direct vision. Personally, I would recommend the videothoroscopic technique. We have used this method of LIMA mobilisation with success in our department many times. When thoracoscopy is used, the skin incision can be smaller than when using the direct vision technique, and there is no need to dilate widely the intercostals space to harvest the artery. We believe that this results in less pain and a better cosmetic effect post-operatively. Secondly, personally I am a *shunter*, meaning that in every case I use a shunt to perform the distal coronary anastomosis. In their paper, the authors are inclined to use sili-con tourniquets to stop bleeding from the site of anastomosis. The use of tourniquets can lead to coronary wall damage and future stenosis of the vessel in this site. It must be emphasised that tourniquets should not be used distally to the place of anastomosis.

In summary, I agree with the authors that the MIDCAB procedure is an excellent option for patients with single vessel disease. However, I believe that patients with multi-vessel disease should be selected for MIDCAB only in exceptional situations to this operation, and that the OPCAB procedure is for them the better solution.

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References

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