Reviewer’s report

Title: Surgical Reconstruction of the Left Main Coronary Artery with Patch-Angioplasty

Version: 1 Date: 23 August 2010

Reviewer: Artur Lichtenberg

Reviewer’s report:

Major compulsory revisions:

Study cohort
• Page 2: “37 patients” vs. page 8: “45 patients”.
Have 8 patients been excluded retroactively?

Follow-up
• Page 4: “aim of the present study was to review the mid- to long-term outcome” and “All patients were followed up clinically and with TEE”.
How long did the follow-up last? Was this period sufficiently long enough to evaluate the long-term outcome (e.g. main stem restenoses)?
• Page 4: “6 patients were followed up with coronary angiography”.
Which were the criteria for reangiography? Assumed ischemia? If it was a routine procedure, why was it not performed in all study patients?
• Page 7: “Normal flow pattern…were demonstrated in 25 patients”.
And what about the missing 2 patients (27 patients received patch angioplasty)?
Again: At which time point(s) was the “normal flow pattern” observed?

Conclusions
• Page 3: “lead clearly to the conclusion that the surgical treatment remains the procedure of choice” and page 8: “These results lead to the conclusion that surgical treatment is much superior to PTCA”.
The article does not present any data about the superiority of surgical treatment. As this point is controversially discussed (e.g. SYNTAX), it should be handled with more care.
• Page 10: “The results…are comparable with those after conventional CABG”.
Neither there is a control group nor do the authors quote data about the outcome of CABG patients and compare the group baseline characteristics. Therefore, this comparison seems to be vague.

Minor essential revisions:

Study cohort
• Page 2: “27 patients (69%)”.

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\frac{27}{37} = 73\%
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• Page 4: “37 patients… of 7200 patients”.

How were these 0.5% selected / What were the inclusion criteria? Are the baseline characteristics of the study group (except age and sex) comparable to those of LMCA stenosis patients who received CABG?

Operation

• Page 8: “13 of 45 patients (???)…had no real stenosis…For safety reasons one vein bypass was performed IN ADDITION as suggested by Soga et al”.

The phrase implicates, that patients with main stem spasms received patch angioplasty and additional CABG (as Soga et al performed)!? This suggestion is underlined as the authors continue “In our opinion these patients have benefitted of the plan to perform the reconstruction”. Reading the abstract, methods and conclusions sections one gets the impression that patients with main stem spasms received NO patch angioplasty.

Conclusions

• Page 7: “In one patient…angiography showed a significant stenosis…at the end of the patch enlargement”.

Is the procedure safe, if one of six patients, who had undergone reangiography, developed a restenosis?

• Page 9 “Thus, we suggest that the presence of isolated stenosis only in the proximal and middle part…should be considered as indications”. This suggestion is based on only 1 patient who developed restenosis after patch angioplasty. How many patients had distal main stem stenoses and how many of them had a long-term follow-up?

• Page 10: “Thus, in cases of unclear or suspected LMCA stenosis, we suggest CT…to unmask…coronary spasm…”.

Coronary angiography showed main stem stenoses in all 37 study patients and so all 37 patients underwent surgery. 9 of them were postoperatively reported to have spasms instead of constant narrowing. In order to avoid unnecessary surgery, it could be helpful to preoperatively perform CT in ALL patients with isolated LMCA stenosis.

Formalities

• The reference list does not correspond to the JCTS style (all authors should be named)

• The article should be revised in respect of grammar and spelling mistakes

**Level of interest:** An article whose findings are important to those with closely related research interests
Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.