Reviewer's report

Title: Early and mid term mortality after coronary artery bypass grafting in women depends on the surgical protocol: retrospective analysis of 3441 on- and off-pump coronary artery bypass grafting procedures.

Version: 1 Date: 29 July 2010

Reviewer: Markus MS Schoenberg

Reviewer's report:

Dear authors:

I am delighted to inform you that I came to the conclusion that this paper is worth publishing after minor revisions have been undertaken.

The topic is of major interest as with the mortality difference after CABG among men and women. The authors report about more than three thousand patients, among them one quarter women. Pne third of the total number of patients has been operated using OPCAB, the remaining two thirds using extracorporeal circulation (ECC). Medical data was prospectively entered and retrospectively reviewed. 30-days and one year mortality rates were analyzed and compared among sexes.

The 30-day mortality under ECC was 5.2 % in women vs. 2.5% in men as described all over the world. Likewise, one year mortality has been reported: 8.7% in women vs. 4.8% in men. Utilizing the OPCAB technique, 30-days and 1 year mortality in women measured 1.7%. Mortality among men was 2.1% after 30 days and 3.7% after one year.

Interestingly, the reported gender specific mortality was unexpectedly low among women and very good by OPCAB. In women , the 30 days mortality was 1.7% using OPCAB and 5.2% using ECC (p=0.002), one year mortality in women was 1.7% using OPCAB vs. 8.7% using ECC (p=0.0004). Oppositional to the general findings in men, 30-days mortality in OPCAB was 2.1%, one year mortality was 3.7%; using ECC early and late mortality was 2.5% and 4.8%. The authors conclude, that female gender is a strong independent predictor and risk factor of increased early and midterm postoperative mortality rates when ECC is used. Additionally, they conclude, that OPCAB significantly reduces early and midterm postoperative mortality in women and may therefore be the preferred revascularization technique among female patients. The conclusion sounds too strict and should be chosen in a gentler way. It seems rather possible that there is a number of reasons for this mortality difference and that has not been addressed.

The paper is written in a good and understandable English

Formally, references are listed in the correct manor. Text and tables are fine.

Level of interest: An article of importance in its field
Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.