

Off-Pump vs on-Pump CABG in high-risk patients: Short- and mid-term outcome.

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Objective: During recent years Conventional Coronary Artery Bypass Grafting (cCABG) and Off-Pump Coronary Bypass (OPCAB) have been compared in several randomised and non-randomised studies. Focus has been on postoperative outcome with short-term follow-up in low-risk patients and therefore little is known of the effectiveness of OPCAB in high-risk patients. Furthermore, it is unknown if a potential beneficial short-term outcome is consistent over time.

Design: In 2001, 217 patients with a Euroscore ≥ 5 were included in an observational cohort study. 162 patients were operated by cCABG and 55 by OPCAB. Follow-up data were retrieved from the Danish national person registry. The study includes a mid-term follow up, with a mean follow up time of 3.97 years \pm 0.32.

Results: No differences in mortality between OPCAB and cCABG was found. In-hospital mortality was 5.5 % in the OPCAB group vs 5.6 % in the cCABG group and mid-term mortality was 21.8 % in the OPCAB group vs 24.7 % in the cCABG group; $p = 0.71$. During the follow-up period 41.5 % of patients with an EF ≤ 35 % at the time of surgery and 43.3 % of patients with an Euroscore > 8 died. 7.0 % in the cCABG group had a perioperative AMI vs none in the OPCAB group; $p < 0.05$. In 74.5 % cCABG's allogenic transfusions of blood components was necessary vs only 55.6 % OPCAB's ($p < 0.05$). No significant differences in CNS complications or atrial fibrillation could be demonstrated..

Conclusion: A similar outcome between OPCAB and cCABG in high-risk patients with respect to mortality was found. OPCAB seems to have a beneficial effect on morbidity. A cautious approach to patients with a combined high Euroscore and low ejection fraction should be the strategy of choice.