

## **COGNITIVE OUTCOMES IN ELDERLY HIGH-RISK PATIENTS AFTER OFFPUMP VERSUS CONVENTIONAL CORONARY ARTERY BYPASS GRAFTING: A RANDOMIZED TRIAL**

B. Østergaard Jensen, P. Huges, L.S. Rasmussen, P.U. Pedersen, D.A. Steinbrüchel, Copenhagen, Denmark

**Objectives:** It has been suggested that the risk of cerebral dysfunction is less with off-pump coronary artery bypass Grafting (OPCAB) rather than conventional coronary artery bypass grafting (CCAB). However, evidence for this statement is preliminary and additional data is needed. We evaluated the effect of OPCAB versus CCAB surgery on cognitive functions at 3 months postoperatively compared to preoperatively in elderly high-risk patients (EuroSCORE  $\geq 5$ ) with the hypothesis that the degree and frequency of postoperative stroke and cognitive dysfunction is equal after OPCAB compared to CCAB.

**Materials and Methods:** The study is a sub-study of the randomized Best Bypass Surgery (BBS) Trial that compares OPCAB to CCAB treatment, with respect to per- and postoperative mortality and morbidity in patients with a moderate to high-predicted preoperative risk. The outcome was cognitive function. A total of 120 elderly patients (mean age 76 years, SD 4.5 years) underwent psychometric testing before surgery and at a mean of 103 (SD, 15) days postoperatively, using a neuropsychological test battery with seven parameters from four tests. Cognitive dysfunction was defined as the occurrence of at least two deficits out of the seven possible. Secondary analysis was performed based on definition of 20% decline in cognitive scores compared to baseline, and using Z-score analysis.

**Results:** Cognitive dysfunction was identified in 4/54 patients (7.4%, 95% CI: 2.1% to 17.9%) in the OPCAB group and 5/51 patients (9.8%, 95% CI: 3.3% to 21.4%) in the CCAB group. We found no difference in incidence of cognitive dysfunction between the groups regardless of the definition applied.

**Conclusions:** In elderly high-risk patients, no significant difference was found in the incidence of cognitive dysfunction 3 months after either OPCAB or CCAB surgery.