SURGERY

CABG-ASSOCIATED STROKE EXPLORED

Investigators from the Cleveland Clinic, OH, USA, have carefully assessed stroke occurrence in patients who have undergone CABG surgery at their institution over the period 1982–2009. As the study authors highlight, a better understanding of the risk factors specific to the timing of periprocedural stroke should help clinicians develop strategies to prevent this devastating complication.

During the 27-year period assessed, 45,432 patients underwent CABG surgery without concomitant cardiovascular procedures. Although various operative strategies were used, most patients (88% of the 21,481 for whom these data were available) underwent arrested-heart surgery on cardiopulmonary bypass.

In total, 705 (1.6%) patients had a periprocedural stroke. Compared with individuals who did not have a CABG-associated stroke, patients who experienced a periprocedural stroke had a substantially higher risk of death for up to approximately 3 months after surgery.

Encouragingly, despite patient risk profiles getting worse, overall occurrence of perioperative stroke declined by 4.7% per year after it peaked at 2.6% in 1988. Of the periprocedural strokes documented, 40% occurred during surgery. Risk of postoperative stroke peaked at 2.6% per day 40 h after the procedure and remained at a constant 0.055% per day between postoperative day 6 and day 12.

Major risk factors associated with both intraoperative and early (<6 days) postoperative stroke included surgery with cardiopulmonary bypass and hyperthermic circulatory arrest, older age, and preoperative atrial fibrillation. This finding highlights the importance of developing new strategies for preventing CABG-associated stroke, since, as the study authors point out, “CABG increasingly is being reserved for elderly patients with extensive coronary disease and comorbid conditions”.

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Original article Tarakji, K. G. *et al.* Temporal onset, risk factors, and outcomes associated with stroke after coronary artery bypass grafting. *JAMA* 305, 381–390 (2011)