Cognition after CABG
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BACKGROUND
Perioperative cognitive decline after CABG has been previously investigated. The incidence of decline appears to be highest at discharge, however cognition gradually improves for most patients over the ensuing 6 months. However, a significant number of patients (10-30%) continue with persistent decline in cognitive functioning

AIM
To prospectively follow cognitive functioning before and after CABG for five years.

METHODS
261 patients undergoing elective CABG from 1989 to 1993 were enrolled. Neurocognitive testing was performed before surgery, the day of discharge, 6 weeks, 6 months and 5 years after CABG.

MAIN FINDINGS
The incidence of cognitive decline was 53% at discharge, 36% at six weeks, 24% at six months and 42% at five years. When patients with and without cognitive decline at discharge were followed over time, most returned to baseline functioning within 6 months. However, at 5 years, the patients with cognitive decline at discharge had a marked decline from their baseline functioning
(P<0.001) and the patients without cognitive decline at discharge did not. This association remained significant even after they controlled for factors such as age and educational level.

CONCLUSIONS
Patients with cognitive decline immediately after elective CABG are at increased risk for long-term cognitive decline.

LIMITATIONS
172 of the original 261 were available for long-term follow-up. Patients who did not complete follow-up were more likely to have more complex illness (i.e., ASA class IV risk, prior MI, and a history of symptomatic neurological disease). This selective attrition may underestimate the persistent decline seen in subsequent follow-up visits.

IMPACT ON INTERNAL MEDICINE
Prior to elective CABG, the potential for cognitive decline needs to be discussed with patients and their families. At this time we can neither predict who will have cognitive decline nor fully explain the reason for those who do decline. For these reasons general information should be given. It is reasonable to say that cognitive decline can occur, it is not infrequent, most improve over the first year but a significant number will have impairment at five years post-operatively. This discussion is less important in the patient where prolongation of life is the focus of the CABG. However, particularly in older patients when quality of life issues may be more paramount, the balance between relief of pain vs. risk for cognitive decline should be discussed.

Related Articles

This study of 102 CABG patients showed a similar 2-stage course of cognitive functioning. In the post-operative period to one year there was improvement in cognitive functioning and in the period from one year to five years postoperatively there was decline. These investigators did not find predictive covariates. This may be due to smaller cohort size (lack of power) or methodological differences.