

SYM 11C COGNITIVE FUNCTION
AND CAROTID
ATHEROSCLEROSIS IN
EASTERN FINNISH MEN

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While the incidence of declines in cognitive functioning increases with age, the role of vascular disease is unclear. To help clarify the reasons for poorer cognitive functioning in the elderly, we studied the association between ultrasonographically assessed carotid atherosclerosis and cognitive functioning in the Kuopio Ischaemic Heart Disease Risk Factor Study (KIHD). The KIHD study conducted extensive examinations, including carotid ultrasound, on a population-based sample of 42, 48, 54, and 60 year old men. At a 4- year re-examination, the 538 men who were 58 or 64 years old were administered five neuropsychological tests: Mini-Mental State Examination (MMSE), Heaton Visual Reproduction Test, (HVRT), Trail Making Test (TM), Verbal Fluency Test (VFT), Buschke Selective Reminding Test (BSR). In age-adjusted regression models, mean intima-media thickness (IMT) of the right and left common carotid arteries was significantly associated with MMSE ($p < .05$), HVRT (immediate) ($p < .02$), TM-A ($p < .06$), VFT ($p < .02$), and BSR ($p < .02$). Maximal IMT was associated with MMSE ($p < .04$), HVRT (immediate) ($p < .02$), TM-B ($p < .03$), VFT ($p < .02$), and BSR ($p < .06$). This suggests an involvement of atherosclerotic processes in cognitive functioning, even at a relatively young age. Results examining selection, disease, and mechanism issues will also be presented. If sub-clinical vascular disease is a risk factor for poorer cognitive function, then interventions to delay or reduce atherosclerosis may delay onset of cognitive decline in the elderly.

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SYM 11D THE IMPACT OF CORONARY ARTERY
BYPASS GRAFT SURGERY (CABGS) ON
COGNITIVE FUNCTION

Stanton P. Newman, D.Phil, Unit of Health Psychology, University College London Medical School, London, UK.

Approximately 350,000 CABGS procedures are performed annually in the USA. Whilst the outcome for the heart has been found to be excellent in relieving the primary symptoms of chest pain and breathlessness, the procedure appears to deleteriously affect cognition in approximately 25% of individuals. Factors found to be predictive of cognitive decline are age and longer durations on extracorporeal circulation.

The findings in pathological studies of the brain and the relationship between cognitive deficits and other measures of the brain, such as MRI will be presented.

One of the mechanisms for the deficits following surgery are microemboli. These may be either of a particulate or gaseous nature. The number of microemboli as determined by Transcranial Doppler techniques has been found to be related to the likelihood of finding a neuropsychological deficit after surgery.

A number of techniques have been shown to influence the likelihood of generating microemboli and in some cases shown to reduce the incidence of cognitive deficits.

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SYM 12S BEHAVIOURAL MEASUREMENT AND
INTERVENTION IN PATIENTS WITH
CORONARY ARTERY DISEASE

Chair: Derek W. Johnston, Ph.D., University of St Andrews
Participants: Bob Lewin, M.Phil., Astley Ainslie Hospital, Johan Denollet, Ph.D., University of Antwerp and Barr Taylor, M.D., Stanford University. Discussant: Derek W. Johnston, Ph.D.

Behavioural interventions in patients with coronary artery disease (CAD) are directed at reducing the effect of the disease or its clinical consequences, such as angina pectoris and myocardial infarction, on psychological distress and quality of life (QoL), the risk factors for CAD and, more rarely, the symptoms of the disease. All these aspects are covered in this symposium. Bob Lewin will describe a randomised controlled trial of a behavioural angina management program which produced reductions in symptoms, medication use and need for coronary artery by-pass surgery in patients with angina pectoris. Johan Denollet will argue that many of the measures of the psychological effects of cardiac rehabilitation are insensitive and will present data on theoretically derived measures of Global Mood and Health Complaints that are particularly sensitive to the effects of behavioural interventions. Barr Taylor will describe the psychological and QoL effects of a large study of physical based, nurse-managed, home-based case-management system for coronary risk factor modification (MULTIFIT).

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SYM 12A THE BEHAVIOURAL MANAGEMENT
OF ANGINA PECTORIS.

Bob Lewin, M.Phil., and Elizabeth L. Cay, M.D. Astley Ainslie Hospital.

In Angina Pectoris the self report of disability and symptoms and the success of medical (drug) treatment is related to a number of psychological variables. This paper reports a controlled trial of a psychological treatment, the Angina Management Programme (AMP) aimed at modifying these variables.

Seventy seven patients were randomly allocated to the AMP or a waiting list control group. Following the AMP patients showed a 70% reduction in episodes of angina, a 62% reduction in the use of nitrates, and a 72% reduction in disability (Sickness Impact Profile). Treadmill testing showed a 57% improvement in exercise tolerance and a significant improvement in time to ST depression (all results $p < .001$). Of the 28 patients who were awaiting coronary artery by-pass surgery (CABG) 50% were removed from the surgery list by their cardiologists as no longer showing sufficient symptoms to warrant surgery.

For some patients the AMP appears to represent a useful alternative to elective CABG.

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