The objective of this study was to examine whether 10-year risk for incident stroke is associated with cognitive decline.

Methods Study sample comprised of 4512 men and 1741 women, mean age 55.6 years, from the Whitehall II study, a longitudinal British cohort study. The Framingham Stroke Risk Profile was used to assess 10-year risk of stroke. It incorporates age, systolic blood pressure, diabetes mellitus, smoking status, prior cardiovascular disease, atrial fibrillation, left ventricular hypertrophy, and use of hypertensive medication. Measures of cognitive function consisted of tests of reasoning, memory, phonemic and semantic fluency, and vocabulary, assessed three times over 10 years. Linear mixed models were used to determine longitudinal associations between stroke risk and subsequent cognitive decline over 10 years.

Results Higher stroke risk at baseline was associated with faster rate of cognitive in tests of reasoning, verbal fluency, vocabulary and global cognition. For example, compared to persons in the low stroke risk group (<2.5%), those in the moderate stroke risk group (2.5≤ stroke risk <5%) and the high stroke risk group (≥5%) had a 12.5% and 43.8% faster rate of decline in, phonemic fluency respectively.

Conclusions Higher 10-year stroke risk in middle age is associated with faster rate of cognitive decline in more than one cognitive domain. These results support early targeting of vascular risk factors to prevent or delay cognitive decline.

01-4.5 PROGNOSTIC VALUE OF A NOVEL CLASSIFICATION SCHEME OF CLINICAL SYMPTOMS AND SIGNS OF HEART FAILURE ADJUSTED FOR MAJOR CONFOUNDERS

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Introduction Only one third of patients suspected of having heart failure (HF) see this diagnosis confirmed. Gender, age, education and obesity are major determinants of unconfirmed suspicions.

Objective To assess the impact of including major confounders in classification schemes based on clinical data solely (model 1—11 symptoms/signs) or considering objective evidence of cardiac dysfunction (model 2).

Methods Cross-sectional evaluation of 1115 community participants aged ≥45 years, 2006—2008. The individuals were classified by Latent Class Analysis with concomitant variables. The classification's prognostic value was assessed by the association with 6-year mortality in an independent sample of 753 subjects.

Results Bayesian Information criteria suggested the best solutions for model 1 and 2 was 2- and 3-class, respectively; the best solution for both models considering concomitant variables was 3-class.

Class 1 had high endorsement probabilities for all items (symptomatic HF); class 2 had high probability for volume overload and objective evidence of cardiac dysfunction and lower probability for subjective troubled breathing (asymptomatic cardiac dysfunction); class 3 had low endorsement probabilities for all items (non-cases).

The sex- and age-adjusted 6-year absolute risk of death was 13.5%, 4.3% and 2.7% for class 1, 2 and 3, respectively, in model 1; for model 2 it was 10.2%, 4.2% and 3.2%, respectively.

Conclusions When relying only on clinical data and not considering confounders, we were only able to distinguish symptomatic HF from the normal population. Considering confounders and evidence of cardiac dysfunction improved the discriminative power to distinguish a third group with asymptomatic cardiac abnormalities.

01-4.6 ALCOHOL-INDUCED DAMAGE TO HEART MUSCLE RATHER THAN ATHEROSCLEROSIS MAY DRIVE THE ASSOCIATION OF CIRCULATORY DISEASE WITH HAZARDOUS DRINKING IN RUSSIA

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Background Circulatory disease mortality in Russia is associated with hazardous drinking. Over the past 40 years there have been major fluctuations in mortality from circulatory disease that are closely correlated with deaths from acute alcohol poisoning (r=0.8 among working-age men). In a case-control study (2003—2005) hazardous drinking was associated with deaths attributed to ischaemic heart disease. However, rather than hazardous alcohol consumption increasing risk of atherosclerotic disease and subsequent myocardial infarction, these effects could be due to misclassified non-atherosclerotic damage to the heart induced by heavy drinking as occurs in extreme form in alcoholic cardiomyopathy.

Methods A population-based sample of 1052 men aged 30—60 years living in Izhevsk (a medium-sized Russian city) were examined (2008—2009). Information about drinking was obtained by interview of proxy informants (mainly spouses or partners). Levels of B-type natriuretic peptide (BNP—a sensitive and highly specific marker of heart muscle stress) and an atherogenic index (ApoB to ApoA1 ratio) were measured in blood.

Results Compared to abstainers, men who drank hazardously had an increased risk of being in the top 20% of BNP (OR 4.80, 95% CI 2.29 to 10.1) adjusted for age and BMI, with non-hazardous drinkers being intermediate in risk. The equivalent association for the ApoB/ApoA1 ratio was in the opposite direction (OR 0.31, 0.16 to 0.61).

Conclusion Hazardous drinkers show a lipoprotein profile associated with a reduced risk of atherosclerotic disease. However, they have raised levels of BNP. Taken together these results support the hypothesis that hazardous drinking among Russian men may induce non-atherosclerotic heart muscle damage.

1.5 NUTRITION

Chair: Prof. K. Srinath Reddy, India

01-5.1 CLUSTER-RANDOMISED CONTROLLED TRIAL OF AN EARLY CHILDHOOD OBESITY PREVENTION PROGRAM: THE MELBOURNE INFANT FEEDING, ACTIVITY AND NUTRITION TRIAL (InFANT) PROGRAM

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Introduction This study aimed to assess the effectiveness of a child-focused early obesity prevention intervention for first-time parents in existing social networks.

Methods The Melbourne InFANT Program is a cluster-randomised controlled trial involving 542 families from 62 first-time parent groups in Melbourne, Australia (87% recruitment; 90% retention). It focuses on positive diet, physical activity and reduced sedentary behaviours from 3 to 18 months of age.