

the primary endpoint 51% of patients in the EA PLUS arm were abstinent compared to 19% in UC at 16 weeks; OR 4.52 (95% CI 3.20 to 6.39, $p < 0.0001$). In partners, the 7-day point prevalence of abstinence was significantly higher in EA PLUS (73% vs 37%) compared to UC, OR 4.7 (95% CI 1.9 to 11.5, $p < 0.001$). 52.3% of patients in EA PLUS achieved a Mediterranean diet score ≥ 9 , compared to 37.3% in UC ($p < 0.001$). 16.2% in EA PLUS achieved the physical activity target compared to 7.2% in UC ($p = 0.002$) with a significantly higher proportion achieving the METSmax target (Chester Step test): 37.8% in EA PLUS vs 27.3% in UC ($p = 0.04$). Blood pressure target ($< 140/90$ (130/80 diabetes or vascular disease) was significantly higher in EA PLUS (52% vs 43%; OR 1.47, $p = 0.03$) than UC but there were no differences in lipid or glucose management. Prescribing of cardioprotective medication was similar in both arms except for lipid lowering drugs; EA PLUS 53% vs UC (45%, $p = 0.06$); high CVD risk individuals 48% EA PLUS vs 39% UC ($p = 0.04$).

Conclusion This European trial has demonstrated that the EURO-ACTION nurse-led preventive cardiology programme, with an intensive smoking cessation intervention including optional Varenicline, helps more vascular and high risk patients, together with their partners, to stop smoking and better achieve the other European lifestyle and blood pressure targets for cardiovascular disease prevention than usual medical care.

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B-TYPE NATRIURETIC PEPTIDE AND CORONARY ATHEROSCLEROSIS: AN ASSOCIATION DEPENDENT ON CENTRAL PULSE PRESSURE

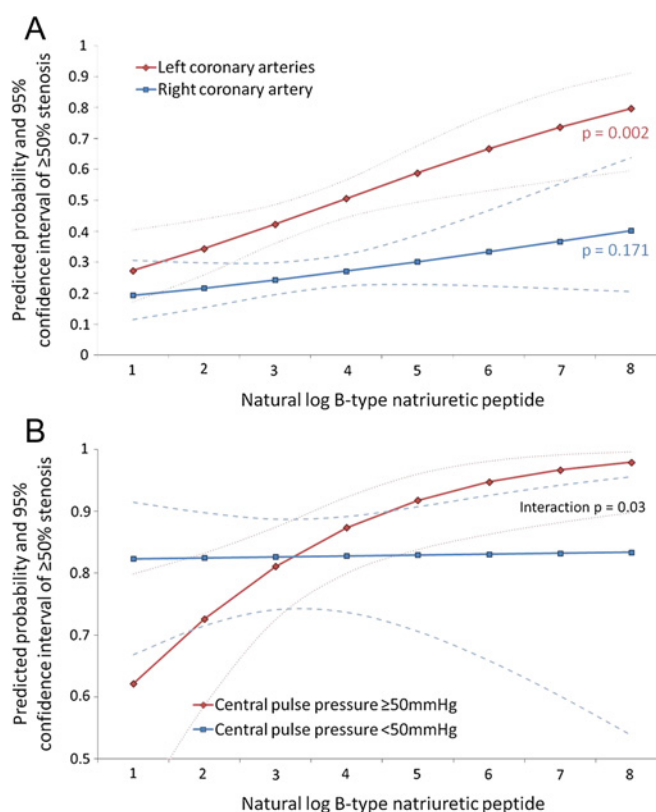
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Background B-type natriuretic peptide (BNP) is traditionally used as a marker of left-ventricular (LV) dysfunction. Prior studies have also identified BNP as a risk marker of coronary atherosclerosis, even in those with normal LV function. We sought to determine the clinical benefit of using BNP in an unselected population undergoing diagnostic angiography and identify any possible mechanisms for this association [the Alternative Risk Markers in Coronary Artery Disease (ARM-CAD) study].

Methods 468 participants without prior coronary bypass surgery were assessed according to the presence/severity of angiographic CAD using a stenosis score weighted for the impact on usual coronary blood flow. Blood samples, risk factor data and radial artery pulse wave analysis (to derive central blood pressures [BP]) were obtained prior to angiography.

Results Mean age \pm SD was 64 ± 11 , BP $144/80 \pm 21/10$, 65% were male, 21% had diabetes, 44% had prior angina or myocardial infarction and 16% had impaired LV. There was a linear increase in BNP with the severity of CAD (p for trend < 0.0001). However, patients with minor coronary stenoses (30%–50%) had elevated BNP levels compared to those with normal coronaries or single vessel CAD ($p < 0.03$), perhaps relating to coronary plaque stability. Multivariate regression, adjusted for risk factors, LV impairment and medications, determined that BNP was an independent marker of the presence of CAD; the OR for any degree of angiographic CAD was 1.33 per log-unit increase in BNP (95% CI 1.03 to 1.71; $p = 0.03$). BNP was associated with disease in the left coronary arteries but not in the right coronary artery (see Abstract 146 figure 1A). Further, the relationship between BNP and CAD was only present in patients with central pulse pressure above the median value of 50 mm Hg (see Abstract 146 figure 1B), suggesting that central BP may be part of the mechanism for the BNP increase seen in patients with CAD.



Abstract 146 Figure 1

Conclusions BNP is associated with the presence and severity of angiographic disease, irrespective of LV impairment. Our data suggest that in patients with coronary atherosclerosis, BNP may be a marker of ventricular wall tension and neurohormonal activation secondary to changes in central BP.

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POST CHALLENGE HYPERGLYCAEMIA: A PREDICTOR OF POOR CARDIOVASCULAR OUTCOME IN PATIENTS WITH ACS

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Background Patients with elevated random or diabetes have been known to have an adverse outcome following acute coronary syndrome (ACS). Most centers use fasting blood glucose to assess the glycaemic status for these patients, however the effect of elevated 2 h-post challenge BG to either diabetic or pre-diabetic levels on adverse cardiovascular events after myocardial infarction has been inadequately explored.

Objective We aim to assess the glucometabolic states of patients presenting with ACS using OGTT, and its the long term prognostic implications.

Methods and Results All patients admitted to the coronary care unit, with ACS to our hospital between November 2005 and October 2008 were included. All patients with known history of diabetes were excluded. All patients underwent an oral glucose tolerance test (OGTT) with 3–5 days after admission. The incidence of all cause mortality, cardiovascular death, re-infarction, CCF and CVA were collected. The primary end point was incidence of cardiovascular mortality, non-fatal reinfarction, CCF and non-haemorrhagic stroke. 930 patients were admitted in the described period with ACS, of which 136 were diabetic and noted were not available for 26, leaving 768 patients in the study. 337 (44%) had normal glucose tolerance,

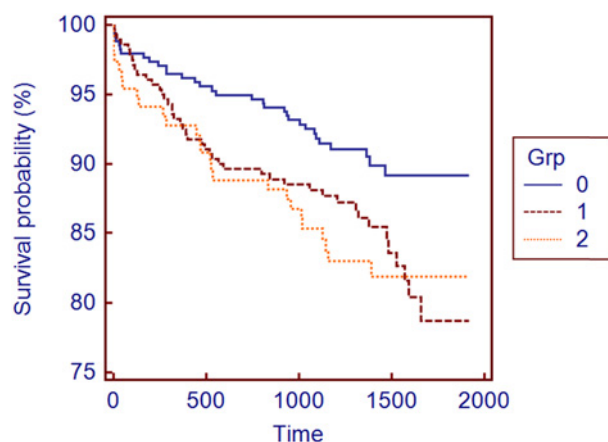
while 279 (36%) had impaired glucose tolerance and 152 (20%) had newly detected diabetes. The outcome of MACE are described in Abstract 147 table 1. The analysis shows a significantly higher incidence ($p<0.05$, HR 1.56, CI 1.15 to 2.13) of adverse cardiovascular outcome in patients with impaired glucose tolerance as well as diabetes (post challenge hyperglycaemia).

Conclusion The study concludes that a significant proportion of patients who present with ACS have abnormal glucose tolerance. Patients with abnormal glucose tolerance have significantly higher incidence of adverse cardiovascular outcome.

Abstract 147 Table 1 Predictive variables associated with adverse cardiovascular events

Variable	p Value	HR (95% CI)
Age	<0.001	1.04 (1.03 to 1.06)
Discharged on β -blocker	0.003	0.64 (0.47 to 0.86)
Abnormal glucose tolerance	0.005	1.56 (1.15 to 2.13)
Past history of MI	0.013	1.87 (1.14 to 3.08)
Hypertension	0.031	1.37 (1.03 to 1.84)
Discharged on ACE-I/ARB	0.041	0.63 (0.40 to 0.97)
Discharged on aspirin	0.067	1.64 (0.96 to 2.80)
Hypercholesterolaemia	0.159	0.80 (0.60 to 1.08)
Gender (male)	0.217	1.22 (0.89 to 1.69)
Smoking status (current smoker)	0.410	1.13 (0.83 to 1.54)
Revascularisation	0.478	0.90 (0.66 to 1.22)

Results of survival analysis using Cox regression with $p<0.5$.



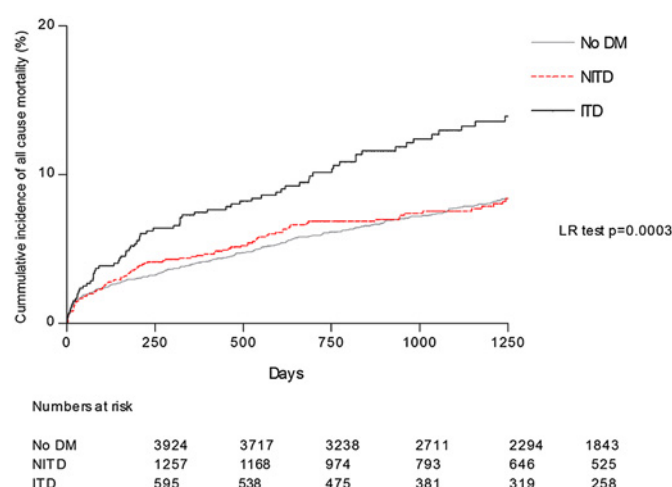
Abstract 147 Figure 1 Life status for MedCalc.

148 INSULIN DEPENDENT DIABETES RESULTS IN WORSE OUTCOMES COMPARED TO NON-INSULIN DEPENDENT DIABETES FOLLOWING CORONARY ARTERY BYPASS GRAFT SURGERY (CABG)

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Aims Previous research has demonstrated that patients with diabetes mellitus (DM) have a worse prognosis than patients without diabetes following coronary artery bypass graft surgery (CABG). However, patients with insulin treated diabetes (ITD) may have a different prognosis when compared with non-insulin treated diabetic patients (NITD) after CABG. There is limited data investigating long term outcomes following CABG in patients with ITD and NITD patients. This study compared outcomes at 5 years following CABG in these two patient groups.



Abstract 148 Figure 1 All cause mortality after coronary artery bypass graft.

Methods 7442 consecutive patients underwent CABG at a single cardiac centre between 2003 and 2011. We identified 2471 patients with DM within this group. Demographic and procedural data were collected at the time of intervention. All cause mortality data were obtained from the Office of National Statistics via the BCIS/CCAD national audit out to a median of 2.80 years (CI 2.08 to 3.56 years).

Results Of 2471 patients with DM, 741 (30.0%) were ITD and 1730 (70.0%) were NITD. ITD patients had significantly higher rates of previous MI (65% vs 52%, $p<0.0001$) and higher rates of renal disease (10% vs 3%, $p<0.0001$). There were more female patients in the ITD group compared to the NITD patients (26% vs 20%, $p=0.001$). There was no difference in Age, rates of Hypertension, Hypercholesterolaemia, Previous PCI, or In-Hospital MACE between the two groups. At 5 years, there was no difference between non-diabetic patients and the NITD ($p=0.63$). However, by 5 years all cause mortality was greater in the ITD group than in the NITD group 14% vs 9% ($p<0.001$). After adjusting for comorbidities, using multivariate analysis, ITD remained an independent predictor of long-term mortality (HR 1.64, 95% CI 1.19 to 2.25, $p<0.002$).

Conclusions Our data suggest that insulin treatment is an independent predictor of long term mortality for patients undergoing CABG. Treatment with insulin rather than diabetic status alone is an important factor affecting outcome in patients with coronary artery disease requiring surgical intervention. Furthermore, these differences in mortality appear after the first year. Hence there is a role for intensive medical therapy in ITD patients and further research is required to confirm these outcomes.

149 ETHNIC DIFFERENCES IN PERFORMANCE OF THE 2010 EUROPEAN SOCIETY OF CARDIOLOGY CRITERIA FOR ECG INTERPRETATION IN ATHLETES

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Background Physical activity is associated with ECG phenotypes that may overlap with those observed in conditions predisposing to sudden cardiac death. In 2005 the study group of sports cardiology produced guidelines to differentiate ECG changes likely to reflect physiological adaptation to exercise from those, which should prompt further investigations. The guidelines were updated in 2010 resulting in improved specificity in predominantly Caucasian cohorts (white athletes; WA). We sought to examine the performance of the 2010 guidelines in athletes of African/Afro-Caribbean origin (black athletes; BA).