suggest that depletion of CREB with siRNA reduces MnSOD protein induction by Ad CA-AMPK.
Conclusion: We showed that AMPK activation induces the cytoprotective genes MnSOD, HO-1, and for the first time, DAF. We have also suggested that CREB may be involved in the pathway for AMPK-dependent induction of MnSOD and that AMPK activation may be a future therapy target.

Incidence of left coronary vessel dominance in patients of acute coronary syndrome: An institutional based coronary arteriographic study

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Background: Correlation of left coronary vessel dominance with acute coronary syndrome is not well defined and remains uncertain. The aim of this study was to assess influence of coronary vessel dominance in patients with acute coronary syndrome and its effect on outcome.
Method: Coronary angiographic images of consecutive patients presenting with acute coronary syndrome (ACS) were retrospectively reviewed to assess coronary vessel dominance. Patients were followed after ACS during a median period of 24 months for the occurrence of all-cause mortality and the composite of reinfarction and cardiac death.
Results: Out of the 1120 patients studied, 920 (82%) patients had a right dominant, 110 (10%) a left dominant, and 90 (8%) a balanced system. The presence of a left dominant system was identified as a significant predictor for non-fatal myocardial infarction and all-cause mortality (HR: 2.90; 95% CI: 1.55–5.73, $p < 0.001$) and had incremental value over baseline risk factors and severity of ACS. In addition, in the subgroup of patients with significant ACS, patients with a left dominant system had a worse outcome compared with patients with a right dominant system (cumulative event rates: 10.2% and 32% at 2-year follow-up for a right and left dominant coronary artery system, respectively, log-rank $p < 0.001$).
Conclusions: The presence of a left dominant system was identified as an independent predictor of non-fatal myocardial infarction and all-cause mortality, especially in patients with ACS. Also the long-term outcome also shows a poor outcome in patients with left dominance.

Ankle-brachial index: A surrogate marker of coronary artery disease – An institutional based study

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Background: In the current study, we aim to determine the relation between ankle-brachial index (ABI) and angiographic findings and major cardiovascular risk factors in patients with suspected coronary artery diseases (CAD) attending Asian Heart Hospital, Mumbai.
Method: In this cross-sectional descriptive-analytic research, we studied patients with suspected CAD. Baseline characteristics of studied subjects including demographics, familial history, past medical history, and atherosclerotic risk factors such as diabetes mellitus, hypertension, hyperlipidemia, and smoking were obtained using a standard questionnaire. ABI was measured in all studied patients using Oscillometric method by PERISCOPE machine. ABI ≤ 0.9 (ABI^+) was considered as peripheral vessel disease and ABI > 0.9 (ABI^-) was considered as normal. Then, all studied patients underwent coronary artery angiography. The results of the questionnaire and angiographic findings were compared in ABI^+ and ABI^- groups.
Results: In this study, 516 patients were thoroughly investigated. ABI ≤ 0.9 was seen in 120 patients (23%). The prevalence of atherosclerotic risk factors was significantly higher in ABI^+ patients than in ABI^- ones ($p < 0.05$). ABI^+ patients had more significant stenosis than ABI^- ones. The mean of occlusion was significantly higher in ABI^+ patients with left main artery (LMA), right coronary artery (RCA), left anterior descending artery (LAD), diagonal artery 1 (D1), and left circumflex artery (LCX) involvements ($p < 0.05$). Also diffusely diseased with multi-vessel involvement in patients were found to be having more ABI^+ compared to single vessel and localized segment diseased vessel.
Conclusions: Our findings of this research suggest that ABI is a simple non-invasive diagnostic tools capable of assessing risk factors and providing an insight into the burden of atherosclerosis at the level of coronaries. It is very simple to do at bedside and more easily repeatable than coronary angiography. Moreover there is no place for issues like radiation hazard, contrast induced nephropathy or vascular complications which may be encountered during coronary angiography.

Prevalence of metabolic syndrome and its clinical and angiographic profile in patients with naïve ACS in North Indian population

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Background: Although, there is evidence to support increased cardiovascular morbidity and mortality in metabolic syndrome (MetS), there is little data available to address the importance of isolated metabolic syndrome as a risk factor in patients presenting with ACS especially in context to Indian population. Hence, we studied the prevalence of metabolic syndrome and its clinical and angiographic profile in naïve ACS (STEMI/NSTEMI) patients in North Indian population.
Material and methods: Single center, prospective, observation study was undertaken in tertiary care centre at Kanpur, North India in naïve ACS patients. Metabolic syndrome was defined according to modified NCEP-ATP III (2004) criteria. Total number of patients enrolled were 324 and patients were studied into two groups (with MetS and without MetS) and their clinical and angiographic profiles were compared.
Results: Overall prevalence of metabolic syndrome in our study was found as 37.65%. Metabolic syndrome patients with ACS were three years older than those without metabolic syndrome (60.3 ± 8.4 vs 57.6 ± 7.9, $p = 0.07$), more likely to be females (35.24% vs 24.25%, $p = 0.05$) and less likely to have tobacco abuse (30.32% vs 42.57%, $p < 0.001$). Patients with MetS were more likely to present with NSTEMI (58.19% vs 36.14%, $p = 0.003$) than STEMI (41.80% vs 63.86%, $p = 0.002$). Although, MetS patients were more likely to develop cardiogenic shock (27.04% vs 17.32%, $p = 0.02$) and recurrent ischemia (13.93% vs 7.42%, $p = 0.01$) than those with no MetS,