Figure 1

Conclusions: Low levels of eGFR, females, and the presence of ulcer-like projection, but not the Stanford classification were predictive of long-term outcomes in patients with intensive medical treatment for acute aortic dissection.

P5172 | BEDSIDE
Maternal hypercholesterolemia during pregnancy is associated with severity of myocardial infarction in young adults

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Background: Elevated Maternal Cholesterol during Pregnancy (MCP) enhances atherogenesis in childhood, but its impact on acute myocardial infarction (AMI) in adults is unknown.
Methods: 89 AMI patients meeting narrow criteria (born after 1945, typical chest pain, transmural infarction Q-waves, elevated creatinine kinase, no cerebrovascular or terminal disease) were identified among patients admitted to coronary care unit in Naples, Italy. Patients were classified by MI severity (severe=involving 3 arteries, left ventricle ejection fraction $\leq$35, CK-peak >1200 mg/dl, or CK-MB >200 mg/dl). The association of MCP with AMI severity was tested by linear and multiple regression analysis that included conventional cardiovascular risk factors, gender, age, and treatment. Associations of MCP with BMI was assessed by linear correlation.
Results: MCP correlated with four measures of AMI severity: number of vessels (β=0.382, p=0.001), ejection fraction (β=-0.315, p=0.003), CK (β=0.260, p=0.014) and CK-MB (β=0.334, p=0.001), as well as survival time (β=-0.252, p=0.031). In multivariate analysis of patients stratified by AMI severity, MCP predicted AMI severity independently of age, gender, and CHD risk factors (OR=1.304, 95% CI 1.107-1.559; p=0.004). Screening for point mutations ruled out that this was due to certain inherited differences in lipid metabolism. Survival was affected mainly by AMI severity.
Conclusions: MCP is associated with adult BMI, atherosclerosis-related risk and severity of AMI.

P5173 | BENCH
Osteoarthritis is an independent risk factor for major adverse cardiovascular events-nationwide case-control studies

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Purpose: The impact of osteoarthritis (OA) on major adverse cardiovascular events (MACEs) remains unclear. We examined the total and each risk of MACEs associated with OA in a nation-wide study.
Methods: A retrospective, case-control study was designed among middle-aged patients (aged 30-60 years) with essential hypertension to alleviate the fundamental issue of hypertension relevant MACEs raised by the use of nonsteroidal anti-inflammatory drugs (NSAIDs) and/or COX-2 selective inhibitor (coxibs). After that, a further prospective study could be designed to test the causality of OA to MACEs (MI, stroke, CHF, ESRD and PVD)
Results: In the first retrosepective study, patients with hypertension, on at least 3 visits, without pre-defined MACEs at the first year (in 1996) were retrieved from Taiwan National Health Insurance Research Dataset to test the concomitant OA

on MACEs. A total of 56,607 subjects were included, of whom 23,530 (41.6%) had concomitant OA. The crude MACE rates were significantly higher in hypertensive patients with OA than those without OA, except for ESRD (all p < 0.05). After adjusting the birth year and sex, the adjusted ORs (95% confidence interval (CI) and p-values) for MACE in patients with both OA and HTN were all significantly higher with 3.09 (2.69-3.54) in MI; 2.47 (2.22-2.75) in stroke; 2.40 (2.06-2.79) in CHF; 1.75 (1.48-2.08) in ESRD and 4.77 (4.38-5.19) in PVD (all p <0.0001), respectively. In the prospective study, when compared with controls and after adjusting the birth year and sex, the adjusted HRs of cases with OA for total MACEs, hospitalized MI, stroke, CHF, PVD and ESRD with dialysis were 2.13 (2.02-2.25), 2.11 (1.86-2.40), 2.07 (1.94-2.20), 2.34 (2.12-2.58), 2.72 (2.41-3.06) and 1.78 (1.54-2.04) (all p< 0.0001), respectively.In addition, the risks for developing traditional CV risk factors including hypertension, DM and dyslipidemia (all p <0.00001) were also significantly increased in OA patients.
Conclusion: Results from this study highlight the risks for developing composite and each MACE (MI, stroke, CHF, ESRD and PVD) rates were significantly higher in patients with OA.

P5174 | BEDSIDE
The effect of LP(a) in patients with heterozygous familial hypercholesterolemia on coronary plaque burden and calcium score determined by CT

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Rationale: People with heterozygous familial hypercholesterolemia (FH) have a genetic predisposition for developing premature cardiovascular disease (CVD). However the clinical phenotype of FH has a high variability which is due to metabolic and environmental factors. One of the metabolic factors that increase the risk for pre-mature CVD might be Lp(a). Previous studies have identified Lp(a) as an independent risk factor for cardiovascular disease. The goal of our study was to analyze the association between calcium scores and coronary plaque burden in relation with plasma Lp(a) levels in patients with FH and to study whether this association was similar in men and women.
Methods and results: From February 2008 until June 2011 145 (93 men, age 52±8) patients with a clinical diagnosis of FH visiting the outpatient clinic for lipid disorders in the Medical Centre were included. These patients underwent a CT coronary angiography to determine the coronary plaque burden and calcium score. From 131 (84 men, age 53±8) of these patients blood was collected and Lp(a) levels were measured. Lp(a) levels were subsequently related to total coronary calcium score(TCS) and coronary plaque burden. Coronary plaque burden is described as diseased coronary segment score per patient (DSS). DDS and TCS were analyzed in a group with low Lp(a) <0,300 g/L and with high Lp(a) >1,000 g/L levels, adjusted for sex, using the Mann-Whitney U test. In men no significant differences in DSS (p=0,960) and TCS (p=0,400) were found if Lp(a) was determined. In women significantly higher DSS (p=0,022) and TCS (p=0,004) were found in the high-Lp(a) group.
Conclusion: Our data show a higher amount of DSS and TCS in women with high Lp(a) levels in comparison with women with a low Lp(a). In men no difference in DSS and TCS is found between high and low Lp(a) groups. We show that serum levels of Lp(a) is associated with disease severity in FH women and not in FH men.
Clinical relevance: High LP(a) levels in FH women are associated with advanced subclinical atherosclerosis. Therefore, we can identify a high risk subgroup in which we should attain an even more strict cardiovascular risk reduction.

P5175 | BEDSIDE
Albuminuria significantly predicts cardiovascular events in patients with type 2 diabetes independently from the baseline coronary artery state

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Purpose: Albuminuria is an important indicator of cardiovascular risk. We have recently shown that it is also associated with angiographically determined coronary artery disease (CAD). Whether albuminuria predicts cardiovascular events independently of the baseline coronary artery state in patients with type 2 diabetes (T2DM) has not been investigated yet.
Methods: We measured urinary albumin and creatinine concentrations in 211 consecutive patients with T2DM undergoing coronary angiography for the evaluation of suspected or established stable CAD. Albuminuria was defined as a urinary albumin to creatinine ratio (ACR) of 30 μg/mg or greater. Prospectively, we recorded vascular events over 3.2±1.4 years.
Results: During follow up, 24.6% of our patients suffered cardiovascular events. The cardiovascular event rate was significantly higher in patients with albuminuria (n=85) than in those with normoalbuminuria (35.3 vs. 17.5%; p=0.003). Cox regression analysis adjusting for age, gender, BMI, smoking, systolic and dias-