was conducted to investigate the influence of mild abnormalities in glucose metabolism on LV structure and function in coronary heart disease. In 182 nondiabetic patients with treated coronary heart disease, two-dimensional and Doppler echocardiographic examinations were performed, and relative wall thickness (RWT), LV mass index (LVMi), fractional shortening, and the ratio of the peak velocity of atrial filling to early diastolic filling (E/A) were calculated. Resting plasma glucose (PPG) and HbA1c levels were positively correlated with the A/E ratio and the deceleration time of the E wave. However, these plasma levels had no correlation with RWT, LVMi, or fractional shortening. Peak A wave velocity and the A/E ratio were significantly higher in patients who had PPG of ≥100 mg/dl and (≤126 mg/dl) than those who had PPG of <100 mg/dl, although age, blood pressure, RWT, LVMi, and fractional shortening did not differ between the two groups. In a multiple regression analysis of all subjects, only PPG and age were independent determinants of the A/E ratio. These observations suggest that PPG is a sensitive predictor for LV diastolic dysfunction in nondiabetic patients with treated coronary heart disease. Since a slight increase in plasma glucose levels is associated with abnormalities in diastolic function independent of LV hypertrophy, an early stage of impaired glucose metabolism in coronary heart disease may specifically deteriorate cardiac diastolic function.

508 Ultrasound measured endothelial function in exertional angina women during their reproductive period and the menopause
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Considerable metabolic disorders, increasing activity in sympathetic nervous system (NSS) predispose to vasoconstriction, contribute to changes in endothelial function in women during menopause. The aim of the investi- gation was to compare endothelial vasomotor function indices and myocardial ischemia in exertional angina women during the menopause and the reproductive period.

Methods: 18 exertional angina women functional class (FC) II, in meno- pause (group I) were included into investigation (47.4±2.8 years of age). 20 reproduction age women, suffering from exertional angina FC II, (aged 44.4±2.2 years) constituted the control group (group II). Concomitant arte- rial hypertension frequency was comparable in both observational groups (88.9% in group I vs 90% in group II). Angina was verified by bicycle ergometry testing, myocardial ischemia was revealed by ECG mapping in 60 women. Endothelial function was studied by high-resolution ultrasound method according to D. Celermajer (1992) with percent change in brachial artery diameter in endothelial-dependent test with reactive hyperemia (RH), index of brachial artery sensitivity to vasodilatation being determined by Ivanova O.V. (1997).

Results and discussion: Disorders in endothelial vasomotor function were observed in 88.9% pts in group I; sensitivity of brachial artery to vasodilata- tion was reduced in 86.7% cases. The reactivity of brachial vessels in re- sponse to RH was decreased in 44.4%, was totally absent in 27.8%, patho- logical vasoconstriction was observed in 16.7% pts. Simultaneously, endothe- lial vasomotor function changes took place twice as less in women of the control group; no pathological vasoconstriction was observed. Disorders in vasodilatation function were accompanied by more frequent manifestation of myocardial ischaemia in group I pts. Thus, it was observed in 83.3% cases in group I and was expressed by total ST segment depression 8.2±0.7 mm in group I and 6.4±0.7 mm in group II. In group II it was noticed only in 35% pts (5.1±0.56 mm, 5.6±0.64 leads).

Conclusion: Thus, expressed disorders in endothelial vasomotor function accompanied by significant myocardial ischaemia was characteristic for angina pts in menopause unlike the situation with reproductive age pts.

509 New methods for the assessment of arterial stiffness in patients with vasospastic angina
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Arterial stiffness is an important risk factor of cardiovascular disease. It has been shown to be an independent marker of CV morbidity and mortality. Several methods may be used to determine arterial stiffness. Ultrasound based measurements are in use by several large epidemiological studies. Several methods may be used to determine arterial stiffness. Ultrasound have been shown to be an independent marker of CV morbidity and mortality.

Conclusion: 5.6±0.64 leades).

510 Predictors of cardiac events in patients undergoing coronary artery bypass surgery
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Background: Left ventricular (LV) systolic function and restrictive filling are predictors of survival in patients with coronary artery disease. Total isovolumic time (t-IVT): time in the cardiac cycle when the ventricle is neither ejecting nor filling is a prognostic marker for exercise tolerance in ischaemic cardiomyopathy. The predictors of cardiac events following coronary artery bypass grafting (CABG) are less clear.

 Aim: The aim of our study was to assess the prognostic role of echocardiographic variables in predicting cardiac events after CABG.

Methods: We studied 74 patients undergoing routine CABG. An echo-Dop- pler study performed 1 month before CABG recorded end-diastolic (EDD) and end-systolic (ESD) dimensions, fractional shortening (FS), E/A ratio, and I-IVT (in m/s; calculated as: 60 - [total ejection time - total filling time]). Restrictive filling was defined as E/A ratio >1.5 and E wave deceleration <140 ms. Cardiac events (obtained through clinical notes and general prac- titioner questionnaires) were defined as those requiring post-operative hospitalisation for chest pain, breathlessness, or arrhythmia.

Results: Mean±SD follow-up was 18±12 months. Of 74 patients (age 65±13 years, 6 male), 29 had a post-operative hospital admission for a cardiac event. There were no differences in age, gender, right ventricular dimen- sion, LV-EDD, LV mass index, or LA size in patients who experienced car- diac events compared to those that did not. However, FS was lower in pa- tients with cardiac events compared to those without (23.2±7% vs 32.8%, p<0.001), t-IVT was longer (16.5±4 m/s vs 10.2±3 m/s, p<0.001), and E/A ratio and I-IVT were lower (1.07±0.56 vs 1.29±0.7, p=0.003; ESD: 4.9±9 mm vs 39±10 mm, p<0.01).

Univariate predictors of cardiac events (odds ratio (95% confidence interval)) were low FS (1.07 vs 2.01; odds ratio: 2.5, 95% CI: 1.3-4.8, p<0.001), long t-IVT (0.96, p=0.001), restrictive filling (0.63 [CI: 0.43-0.94, p=0.025], and in- creased ESD (0.68 [CI: 0.49-0.94, p=0.020]). Independent predictors of car- diac events were low FS (1.05 [CI: 1.00-1.09, p=0.019) and long I-IVT (0.92 [CI: 0.85-0.97, p=0.045])

Conclusions: Despite complete revascularisation by CABG, the combina- tion of systolic dysfunction and long I-IVT suggest persistent ventricular dyssyncrhony that contribute to post-operative cardiac events. Detailed as- sessment of such patients for potential benefit from electrical resynchronisa- tion may optimise their cardiac performance and hence clinical condition.

511 Baseline flow propagation velocity and late diastolic peak-A velocity are the best predictors of adverse events after myocardial infarction
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Left ventricular (LV) systolic function has proven to be predictor of poor prog- nosis. Since LV systolic and diastolic function are interrelated rises the question if some of diastolic parameters may predict adverse events and if so are they stronger predictors than systolic parameters. Aim: To investigate the prognostic significance of LV diastolic indices mea- sured in acute phase of a first myocardial infarction (MI) for development of severe heart failure (NYHA class III), reinfarction and cardiac death.

Methods: Two-dimensional and Doppler echocardiography were performed during first 72 hours of MI in 117 consecu- tive patients. Seventy of them were followed-up in a 40.5±15 month- period.

Results: Patients were divided into two groups according to ejection frac- tion (EF): Group 1 without systolic dysfunction with EF>45% (n=72) and Group 2 with EF<45% (n=45). Significantly different diastolic parameters are deceleration time (213±53 ms vs 184±45 ms, p=0.003) and flow propaga-