

Summaries of Articles

Clinical Investigations

Is There any Difference in Plasma Homocysteine Levels Among Various Clinical Types of Angiographically Determined Coronary Artery Disease

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Recent studies have shown that moderately elevated plasma homocysteine concentrations are an independent risk factor for coronary artery disease (CAD). In addition, it has been demonstrated that elevated plasma homocysteine level increases mortality in patients with acute coronary syndrome. But, there is no study that has demonstrated whether there is any difference between clinical varieties of CAD with respect to plasma homocysteine levels. The aim of the present study was to examine the plasma homocysteine levels in various clinical presentations of CAD.

In this study, consecutive 123 patients (94 male, mean age: 54.4 ± 9.6 years) with significant ($\geq 50\%$) coronary artery disease were recruited together with age-matched 30 healthy subjects as control group (24 male, mean age: 53.6 ± 9.9 years) whose coronary angiograms were normal. Patients with CAD were divided into four different groups according to their clinical types of CAD. Group 1: patients with exercise angina (n: 27); group 2: patients with class III unstable angina pectoris or non-ST elevation acute myocardial infarction (n: 43). Group 3: patients with ST elevation acute myocardial infarction (n: 33). Group 4: patients with old (>2 month) myocardial infarction or those subjected to percutaneous transluminal coronary angioplasty or coronary artery by-pass graft operation, with no angina pectoris (n: 20). Venous blood samples were collected from all groups on admission to the hospital. Plasma homocysteine concentrations were measured by high-performance liquid chromatography with fluorescence detection.

Plasma homocysteine levels were significantly higher than the control group in patients with CAD (8.64 ± 1.52 $\mu\text{mol/L}$, 14.92 ± 4.25 $\mu\text{mol/L}$; $p < 0.001$, respectively). But, there were no significant

differences of homocysteine concentrations among patients with CAD sub-groups (14.52 ± 3.99 $\mu\text{mol/L}$; 15.18 ± 4.51 $\mu\text{mol/L}$; 15.37 ± 4.68 $\mu\text{mol/L}$; 14.33 ± 3.35 $\mu\text{mol/L}$).

This result shows that a significant difference for plasma homocysteine levels does not exist among clinical types of CAD in patients with angiographically determined CAD.

Key words: Homocysteine, coronary artery disease

Effects of Various Maneuvers on the Right and Left Atrial Pressures

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This study aims to determine the most effective maneuver, increasing pressure gradient between the right and left atrium, using the simultaneous right and left atrial pressure records.

Thirty-two coronary care unit patients, in whom a Swan-Ganz catheter was inserted because of acute left ventricular dysfunction, hypotension, sinus tachycardia with unknown cause, were included in this study. The basal values of right atrium (RA) pressure and pulmonary capillary wedge pressure (PCWP) were recorded. Patients were trained with several trials to perform breath holding, successive three strong coughs, Valsalva maneuver, 20° head-down, respectively. In the end of these maneuvers, the highest RA pressure and PCWP were recorded simultaneously.

Results: All maneuvers caused an increase in right atrial pressure. The highest mean RA pressure was obtained by means of the Valsalva maneuver (7.6 ± 5 versus 20.4 ± 7.6 mmHg before and after Valsalva, respectively; $p < 0.001$). PCWP (18.8 ± 5.9 mmHg) increased only with coughing (21.2 ± 6.7 mmHg, $p < 0.01$) and 20° head-down maneuver (20 ± 5.7 mmHg, $p < 0.05$). The highest increase in pressure gradient between mean RA pressure and PCWP was observed during the Valsalva maneuver (-11 ± 6.6 versus 2.3 ± 5.9 mmHg, $p < 0.001$). The lowest

increase was obtained in 20° head-down maneuver (-11±6.6 versus -8.5±5.8 mmHg, p<0.001).

Conclusion: The Valsalva maneuver appears to be the most effective maneuver causing increase in the pressure gradient between the right and left atrium.

Key words: Patent foramen ovale, maneuvers

Review

Distal Embolisation Protection Devices in Interventional Cardiology

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Distal embolisation during the percutaneous revascularisation procedures can effect the prognosis negatively by causing myocardial injury and no-reflow. Because of the insufficient prevention of this condition by pharmacologic agents and new revascularisation techniques, various distal protection devices have been developed. With encouraging results of the first experiences of these devices, multicenter and randomized trials were planned and initiated for a more detailed evaluation. Periprocedural distal embolisation can be prevented especially in percutaneous interventions to the saphenous vein grafts or risky native coronary arteries, and it may be possible to achieve a better prognosis.

Key words: Distal protection device, embolisation, angioplasty

Case Reports

Spontaneous Healing of the Dissection of the Internal Mammalian Artery Graft

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Coronary angiography in a 59-year-old woman who underwent coronary artery bypass grafting (LAD-left internal mammalian artery, Cx OM1-left radial artery) one month previously, showed dissection of the left internal thoracic artery with coronary artery perfusion being preserved. The patient received warfarin, ticlopidin and nitrate therapy. Control

angiography performed 8 months later showed total healing of the dissected segment.

Key words: coronary artery surgery, internal mammalian artery, dissection

A Case of Restrictive Cardiomyopathy and Findings of Family Screening

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Restrictive cardiomyopathy is a rare disease of the heart muscle. We present here the clinical findings and results of family screening of a case with restrictive cardiomyopathy. All affected cases had palpitation and atypical chest pain. Echocardiographic examination revealed mild to moderate and localized left ventricular hypertrophy, marked left atrial enlargement and restrictive filling pattern in two, mid-segmental hypertrophy and relaxation abnormality in one patient. Ambulatory ECG recordings showed frequent supraventricular arrhythmias and ST segment depression in all three cases. Two of them died with sudden death, nine months after diagnosis. The third case received antiarrhythmic, anticoagulant and heart failure therapy. In electrophysiological study an atrioventricular nodal reentrant tachycardia, a ventricular tachycardia and ventricular fibrillation were detected. The patient underwent a successful slow-pathway radiofrequency catheter ablation and an ICD was implanted. The cardiomyopathy presenting with different phenotypic findings in the same family, high risk for sudden death and poor prognosis and its characteristics consistent with restrictive and hypertrophic cardiomyopathy were discussed.

Key words: Cardiomyopathy, familial, sudden death

Long-term Clinical and Angiographic Follow-up a Rare Stent Complication: Early Stent Deployment. A Case Report

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Though early stent deployment is a rare complication, which was especially seen in the first

generation stents loaded on balloon manually, it may lead to severe coronary ischaemia or life-threatening systemic embolism. In this report, a 73-year old patient who underwent coronary angiography for unstable angina pectoris and stent implantation to LAD lesion is presented. Four years previously a stent that could not be passed through the stenosis had stripped away from the delivery balloon. The undeployed stent was squeezed to vessel wall by inflating the balloon, and the lesion was dilated with the balloon only. In the control angiograms after one and 4 years, it was seen that the stent migrated to the distal part of LAD and stabilized in the same site and restenosis had not occurred. Thus, undeployed stents should be removed; in cases of failed removal procedure, squeezing the stent can be performed in the hope of no severe complication to arise.

Key words: Percutaneous coronary interventions, early stent deployment, stent migration

Rectus Sheath Hematoma in Patients Undergoing Low Molecular Weight Heparin Therapy: Case Reports and Review of the Literature

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Spontaneous abdominal rectus sheath hematoma (RSH) is a clinical entity which has previously been known but rarely seen and may have a fatal outcome. One of the factors predisposing to RSH is anticoagulant therapy. The use of low molecular weight heparins (especially in the treatment of acute coronary syndromes and deep venous thrombosis) has progressively increased in the past years and has led to reports of RSH cases secondary to abdominal subcutaneous injections. We presented three cases with RSH. Two patients succumbed due to using low molecular weight heparins. RSH should be considered in the elderly, and especially in women, who rapidly develop an abdominal mass and anemia in the course of subcutaneous low molecular weight heparin therapy.

Key words: Rectus sheath hematoma, low molecular weight heparin.

Exercise-Induced Neurocardiogenic Syncope (Case Report)

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Neurocardiogenic syncope is the most common cause of syncope. This disorder is considered to be an abnormality in the complex neurocardiovascular interactions responsible for maintaining systemic and cerebral perfusion. Exercise-induced syncope is thought to be one of the rare manifestations of neurocardiogenic syncope. Exercise-induced syncope is reported in highly trained athletes and no other cause for syncope could be assigned to these patients, except abnormal neurocardiogenic reflex. In this case report, we presented a 42-year-old man who experienced a syncopal episode during treadmill exercise testing. All extensive evaluation revealed no identifiable cause of syncope except an abnormal tilt table test.

Key words: Syncope, exercise, exercise testing

Acute Coronary Syndrome in a Young Man with no Known Risk Factor

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Coronary artery disease occurs at earlier ages due to unhealthy lifestyle associated with increasing industrialization, and extensive cigarette smoking at earlier ages. We report a previously healthy 24-year-old male patient presenting with acute anterior myocardial infarction. The interesting feature of this young patient in whom obstructions of the left anterior descending and circumflex arteries were demonstrated angiographically was the absence of any known coronary artery disease risk factor including lipoprotein(a), homocystein, apolipoprotein B, C-reactive protein, procoagulant factors, bacteriologic and immunologic analyses. This finding suggests the presence of some unknown important risk factors responsible for the development of coronary artery disease.

Key words: Coronary artery disease, risk factors