Excessive Induced Neurocardiogenic Syncope Observed in a Patient Who Went Through Treadmill Test on the Suspicion of Classic Neurocardiogenic Syncope

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Introduction: Classic neurocardiogenic syncope is characterized by loss of consciousness in typical situations that can induce orthostatic or emotional stress. Usually the patient is young healthy individual without any structural disease that can induce syncope. Exercise induced neurocardiogenic syncope, on the other hand, patient experiences syncope immediately after exercise. The pathophysiology is yet not clearly understood, but it is thought to share similar mechanism with the classic neurogenic syncope. Increased vagal activity seems to play a role in inhibiting adequate compensation for decreased venous return due to vasodilation. Exercise induced neurocardiogenic syncope is rarely reported and studied. Only 1 article reports serial cases in Korea. We report a case of a young male who was admitted to the hospital on the suspicion of classic neurocardiogenic syncope, but experienced exercise induced neurocardiogenic syncope during treadmill test.

Case: A 36-year-old Police officer with no medical history presented to hospital after an episode of syncope which occurred when he woke up from bed and urinated in the middle of the night. He had no regular medication, and had no family history of sudden cardiac death or arrhythmias. His EKG and cardiology markers, brain MRI, EEG, echocardiography, 24hr Holtermonitoring results were unremarkable. He went through treadmill test and completed the test to Bruce protocol stage V without any symptoms. His heart rate started to slow down on recovery phase and immediately following the exercise he had syncope, recovered consciousness after 30 seconds.

Discussion: Exercise induced neurocardiogenic syncope is a rarely reported phenomenon, and its coexistence with the classic neurocardiogenic syncope is reported in some cases. Because it’s mechanism and treatment strategy is yet not clearly confirmed, more investigation is needed.

Prevalence and Treatment of Dyslipidemia Among Patients with Coronary Artery Disease in Vilnius, Lithuania

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Background: to determine the prevalence and treatment of dyslipidemia among patients with coronary artery disease in Vilnius, Lithuania.

Methods: A retrospective single center study was carried out in Vilnius University Hospital Santariskiu Klinikos. 463 patients with an acute coronary event were selected (mean age 61.28 ± 10.4 years; 76% men). Their blood cholesterol levels were monitored during their admission to the hospital and one year after an acute coronary event. Additional information on treatment of dyslipidemia was obtained using medical records.

Results: 80.3% of patients with acute coronary disease have dyslipidemia. 44% of patients were newly diagnosed dyslipidemia, 24% were not familiar with such condition. Lipid-modifying therapy was initiated in 77%, of patient during hospital stay. The majority (59%) of those taking atorvastatin. The medium dosage of medication was 28.39 ±22.47 mg. None of the patients were administered with resins, inhibitors of cholesterol absorption, nicotinic acid or fibrates. Only, 43% of these patients have been dieting. After one year only 57% of patients were actually taking prescribed medications. Overall, only 19% of those with dyslipidemia had their lipids under recommended levels. Only 41% of those taking lipid-modifying medication reached a recommended target of LDL-C <2 mmol/L.

Conclusions: Dyslipidemia is highly prevalent in patients with coronary artery disease, but 24% of patients are not familiar with having dyslipidemia. After one year decreasing usage of medication to control dyslipidemia. Efforts to promote diet and continuing appropriate treatment should be intensified.

R Wave Amplitude of Avl Derivation Seems to be Important in Predicting Arterial Stiffness Parameters

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Background: Studies have shown that arterial stiffness is an independent predictor of cardiovascular diseases. Left ventricular hypertrophy (LVH) is an independent risk factor for early death. It is caused by malignant ventricular arrhythmias due to ventricular hypertrophy. In this study we aimed to investigate the relationships between arterial stiffness parameters and electrocardiographic criteria for LVH.

Methods: A total of 59 subjects (30 females, 29 males) were included into the study. The subjects were the patients having arterial stiffness and electrocardiographic measurements applied in the internal medicine out-patient clinics for their chronic diseases or based upon their complaints.

Results: The pulse wave velocity (PWV) was significantly associated with Sokolow-Lyon on II (r=0.269; p=0.041) and the central aortic pressure (CAP) was significantly associated with Sokolow-Lyon on I’ and Romhilt-Estes Score (r=0.303; p=0.021 and r=0.275; p=0.037, respectively) in whole group. The augmentation index of aortic (AIa) was significantly associated with Sokolow-Lyon on II’ (r=0.381; p=0.042) in men. The CAP was significantly associated with Sokolow-Lyon on I’, Cornell Product and Romhilt-Estes Score (r=0.524; p=0.004, r=0.402; p=0.021 and r=0.444; p=0.016, respectively) in women.

Conclusions: These data suggest that some arterial stiffness parameters may be predicted by using R wave amplitude of Avl derivation. Although our small scale preliminary investigation confirms some clues for this approach, it is obvious that large scale and more detailed investigations are needed.
Morphological Variation of the Carotid Sinus Location

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Background: Carotid sinus massage is widely used to detect carotid sinus hypersensitivity in patients presenting with syncope. Recent guidelines recommend 5 to 10 seconds of carotid sinus massage in supine and upright positions with beat-to-beat monitoring, but somebody did not respond to the procedure.

Objectives: The aim of this study was to describe the common Carotid Artery Bifurcation (CB) in cadavers and to study the variability of the CB location in comparison with vertebra level.

Methods: Measurements were performed on 100 cadavers by the direct inspection method. The vertebra level of CB was differently distributed in distance of the whole neck measured along the vertebral column between upper borders of C1-C2 to lower border of CB. 54% of the level of CB was asymmetrical between the right and left side.

Conclusion: We showed the anatomical variation of carotid sinus location. Anatomical locations of the carotid sinus bifurcation indicated wide variability. This variation was found to have an impact on the pressure transmission at the carotid sinus region in those individuals that displayed the superior/inferior range of carotid sinus loci.