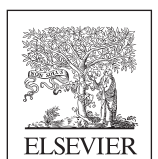# GL🫀BAL HEART

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change. No correlation was found between in-hospital outcomes and the presence of ECG change (p=0.709).

Conclusion: Our results demonstrate that the probability preoperative ECG changes during the initial years are rare; furthermore, when they occur, they do not have any significant impact on the postoperative outcome.

Disclosure of Interest: None Declared

PT019

Chest pain in primary care: a study by a telecardiology service

Milena Marcolino[1,2], Tati G. P. Assis[3], Daniel M. F. Palhares[2,3], Maria Beatriz M. Alkmim[2], Antonio L. Ribeiro[1,2]*

[1]Department of Internal Medicine, Medical School, Universidade Federal de Minas Gerais, [2]Telehealth Network of Minas Gerais, [3]Medical School, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil

Introduction: Chest pain is a common presentation in primary care. Although coronary artery disease is an infrequent etiology in this setting, it should be ruled out. In this context, the electrocardiogram (ECG) is very useful to assess patients with chest pain.

Objectives: To assess the prevalence of ECG abnormalities in primary care patients with chest pain.

Methods: This is an observational retrospective study. All ECGs performed by the Telehealth Network of Minas Gerais, a Brazilian public telehealth service, from January to December 2011, were analyzed. This service attends 660 cities in the state of Minas Gerais. The prevalence of ECG abnormalities was assessed.

Results: During the study period, 197,101 ECGs were performed in patients with chest pain (mean age 50±19 years, 59.4% women). Hypertension was the most frequent co-morbidity (26.8%). Family history of coronary artery disease was reported in 13.1%, smoking in 6.3% and diabetes in 4.6%. Regarding the ECGs, 61.7% had no abnormalities. The prevalence of abnormalities suggestive of ischemia was 4.4%: 2.5% poor R wave progression, 1.5% abnormalities of acute ischemia; 0.4% pathological Q waves. First degree atrioventricular block as observed in 1.8%, left bundle branch block in 1.6%, right bundle branch block in 2.8%, atrial fibrillation 1.7%, left ventricular or atrial hypertrophy in 6.5%, premature beats in 4.2% and nonspecific repolarization abnormalities in 17.4%.

Although the percentage of patients with abnormalities suggestive of acute ischemia is low, primary care physicians should have in mind that a normal ECG does not rule out coronary artery disease, and a careful clinical assessment should be performed in all patients.

Conclusion: In this study in a large sample of primary care patients with chest pain, the prevalence of exams with no abnormalities is higher than 50%, and a minority of patients has abnormalities suggestive of myocardial ischemia.

Disclosure of Interest: None Declared

PT021

The effects of Cilostazol on the ion Channels in rat right ventricular myocyte

Guangping Li[1], Rong He[1]*

[1]Department of Cardiology, The Second Hospital of Tianjn Medical University, Tianjin Institute of Cardiology, Tianjin, China

Introduction: It is important for Brugada syndrom contributing sudden cardiac death, to study the influence on ion chennel, especially Ito associated with Burgada wave.

Objectives: This study aims to observe the effects of Cilostazol on the transient outward potassium current and L-Type calcium channels in rat right ventricular myocyte.

Methods: Single myocytes were isolated from right ventricular of adult rat with collagenase II. Ito and ICa,L in cell of right ventricular were recoreded by whole-cell patch clamp technique. This experiment were divided into two parts, (1) acute pharmacological expriment means the perfusion expriment, there are four groups, Cilostazole 1, 2, 5, 50μmol/L groups. The differentce about current density of Ito was recoreded between before and after drug perfusion in each group, and the differentce about change of current density of Ito also was observed among four groups. (2) chronic pharmacological expriment means oral medication expriment invided two groups: control group(CON group) and exprimental group(CILO group), The differentce about current density of ICa,L was recoreded between the two groups.

Results: 1. The result of perfusion expriment (1) In Cilostazole 1, 2, 5, 50μmol/L each group, current density of Ito after cilostazol perfusion is lower than before, and here were significant statistical differences when the self-command voltage +60 mV (all P<0.05), the current density of Ito in ecah group were: (20.82±7.42) vs(7.48±2.56) pA/pF; (18.64±7.89) vs (7.63±1.78) pA/pF; (18.87±5.05) vs(7.19±1.79); (21.45±2.54) vs(6.96±2.31) pA/pF; (2) in each command voltage, this study compared the reduction rate of current density of Ito among four different concentrations of cilostazol perfusate, and found there was no significant changes among four groups without statistical significance(P>0.05), in addition, reduction rate of current density of Ito are all about 60% among four groups in +60 mV. 2. The result of oral medication expriment : the current density of ICa,L in CON group is sightly higer than CILO group in +60 mV without statistical significance, (-6.24±2.65) pA/pF vs (5.17±1.61) pA/pF (P>0.05).

Conclusion: Ito was significantly inhited by Cilostazole directly acting on the rat right ventricular cells.

Disclosure of Interest: None Declared

PT022

Fractal and antifractal analysis of triggers and resonators in electrical instability in the patients with coronary heart disease and sinus node dysfunction

Sergii K. Kulishov[1], Kostyantyn Y. Vakulenko[1], Olexander M. Iakovenko[2]*

[1]internal medicine No 1, Higher state educational institution of Ukraine (HSEIU) "Ukrainian Medical Stomatological Academy", Poltava, [2]V.P. Komissarenko Institute of Endocrinology and Metabolism AMS Ukraine, Kyiv, Ukraine

Introduction: It is known that fractal myocardial electrical unstability are more better diagnosis as investigation of PQRST-PQRST rotation bodies (Kulishov S.K. et al., 2004). The purpose of the study was determination triggers and resonators of electrical instability in the patients with chronic CHD (CCHD) and SND.

Objectives: The study included 26 patients (62,83±1,49; 8,92 years old) with CCHD and SSNS, including 22 with stable angina pectoris (SAP), II-III functional class and 4 - arrhythmic CHD. Essential hypertension was presented at 18 (69,2%) patients from 26. 10 (38,5%) patients from 26 had postinfarction cardiosclerosis.

Methods: Holter electrocardiography monitoring and daily blood pressure monitoring was used. Fractal and anti-fractal analysis were used. Statistical analysis included parametric and nonparametric methods (program SPSS for Windows Release 13.00, SPSS Inc., (1989-2004).

Results: In the patients with CCHD and SND, EH III stage, postinfarction cardiosclerosis average daily value of low power component of heart rate variability (439,25 ± 126,77 ms^2; 253,54; P = 0.019) was higher activity of the sympathetic autonomic nervous system compared to surveys with concomiant EH II stage. In the patients with CCHD and SSNS occur iterative function systems - geometric transformation of the type of rotation and reflection depolarization-repolarization processes, including the appearance of ventricular and supraventricular arrhythmias; changes of ST segment and T wave by the direction, amplitude and duration (p <0,01 according to criterion of sign). Atrial fibrillation, which was registered in 19.5% of patients with CCHD and SSNS refers to the iterative function systems, characterized by replacement of P waves by smaller f-wave. Iteration formula in 42.3% of patients with CCHD and SSNS characterized by tachycardia-bradycardia periods. The combination of the main types of iterations, the presence of fractal formula and substitution mechanisms, and functional systems, observed in 19.2% of patients with CCHD and SSNS.

Conclusion: Fractal and anti-fractal analysis of myocardial electrical instability in the patients with CCHD and SSNS allowed to determine mechanisms of arrhythmogenesis, correction treatment.

Disclosure of Interest: None Declared

PT023

Pecularities of cardiac remodeling, cytokines change, electric myocardial instability in patients with chronic ischemic heart disease and arterial hypertension as predispose to making treatment decision

Sergii K. Kulishov[1], Kostyantyn Y. Vakulenko[2], Olexandr M. Iakovenko[3]*

[1]internal medicine No 1, Higher state educational institution of Ukraine (HSEIU) "Ukrainian Medical Stomatological Academy", [2]Poltava Regional Clinical Cardiological Dispensary, Poltava, [3]V.P. Komissarenko Institute of Endocrinology and Metabolism AMS Ukraine, Kyiv, Ukraine

Introduction: It is known that coronary heart disease (CHD) causes changes of cytokine activity, morphological and electrical heart remodeling. The purpose of the study was to determine the influence of cardiac remodeling, ischemic, pressor factors, changes of cytokine system on the electric myocardial instability in patients with chronic ischemic heart disease (CCHD) and arterial hypertension (AH) as a precondition for making treatment decision by genetic algorithm.

Objectives: The study included 36 patients (62,83± 1,49; 8,92 years old - M±SEM,SD; men – 27, women - 9) with CCHD and AH, including 24 with stable angina pectoris (SAP), II-III functional class, 12 - with diffuse cardiosclerosis and heart failure, arrhythmias. 36 healthy subjects (59,3±0,85; 11,22 years old; men – 24, women 12) were consisted control group.

Methods: We measured the interleukins – 1 beta (IL 1β), 6, 8, 10 (IL 6; 8; 10), C-reactive protein, factor of tumor necrosis alpha by ELISA. Holter electrocardiography monitoring and daily blood pressure monitoring, echocardiography were used. Statistical analysis included parametric and nonparametric methods (program SPSS for Windows Release 13.00, SPSS Inc., (1989-2004).

Results: Indicators of echocardiographic morphometry, daily monitoring of blood pressure, electrocardiography by Holter, cytokine status were depended from the severity of supraventricular and ventricular arrhythmias at patients with CCHD in combination with AH, including prevalence of pair supraventricular extrasystolia, atrial fibrillation or prevalence of ventricular arrhythmia classes IV-V by Lown-Wolf. The relationship between levels of interleukins (IL 1β and IL 10 by Spearman correlation – R=0,512, PR=0,002); dynamics of arterial pressure and IL 1β in patients with CCHD and AH (average daytime systolic blood pressure and IL 1β – R=0,46, PR=0,036).determine peculiarities of course of diseases. Application of evolutionary algorithms contributed to determine structural component syndromes in patients with coronary artery disease, diagnostic and therapeutic making decisions.

Conclusion: Data of heart remodeling, ischemic, pressor factors, changes of cytokine system, electric myocardial instability in patients with CCHD and AH, arrhythmias were main factors for making treatment decision by genetic algorithm.

Disclosure of Interest: None Declared