remarkable and uniform reduction of ENDO LS in LV segments, walls and regional parts, especially in LV basal region. NYHA classification, pro-BNP and basal septal ENDO LS were independent predictors of AL-CA.

GW26-e2967

Characteristics and Prognosis of Systemic Immunoglobulin Light Chain Amyloidosis with Cardiac Involvement: a Single Institutional Experience from China

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OBJECTIVES Cardiac amyloidosis (CA), an infiltrative restrictive cardiomyopathy, is usually delayed in diagnosis, leading to poor prognosis. The aim of the study is to evaluate characteristics and prognosis of CA to enable early diagnosis and optimal management for cardiologists.

METHODS We retrospectively analyzed 53 patients (63.2% men, mean age 60.3±9.8 years) with biopsy-proven diagnosis of systemic immunoglobulin light chain amyloidosis (AL) in our institution from January 1993 to December 2014. Clinical features, outcomes and possible prognostic factors on survival were evaluated.

RESULTS A total of 32 (60.4%) patients were diagnosed as CA with a median diagnostic duration of 8 months. Only 12 (37.5%) of CA patients referred to Cardiology Department before diagnosis including 11 (91.7%) with congestive heart failure (CHF) and 1 (8.3%) with advanced atrioventricular block. Nineteen (59.4%) CA patients presented with more than 3 organs involved. The cardiovascular symptoms of CA include dyspnea on exertion (46.9%), lower limbs edema (71.9%), nocturnal paroxysmal (18.8%), hypotension (28.1%), chest pain (6.3%), syncope (15.6%) and cardiac arrest (6.3%). Electrocardiographic manifestations include poor R wave progression (84.6%), low QRS voltage (46.7%), pseudo-infarct pattern (46.7%) and conduction disturbances (28.3%). The mean thickness of interventricular septum on echocardiography was 1.5±0.3 cm. CA patients with CHF had lower systolic blood pressure (102.3±14.5 vs. 124.6±21.9 mmHg, P=0.004) compared with those without CHF. During a median follow up of 20 months, CA group showed tendency of poor prognosis compared with Non-CA group (median survival time: 27 vs. 40.5 months, P=0.124). Hypotension was significantly associated with poor prognosis in both systemic AL amyloidosis and CA patients (HR 5.312, P=0.010; HR 4.523, P=0.020, respectively).

CONCLUSIONS CA is not rare in systemic AL amyloidosis and frequently underrecognized. The prognosis was poor with hypotension being the negative predictors of survival. For patients with newly-onset hypotension, accompanied with other manifestations like increased wall thickness and low QRS voltage, CA should be considered.

GW26-e4548

Significance of sarcomere gene mutation in patients with dilated cardiomyopathy

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OBJECTIVES Dilated cardiomyopathy (DCM) is a myocardial disease with a high mortality rate. Approximately 40 genes have been found to be associated with DCM to date. Non-familial DCM can also be caused by gene mutations, suggesting that genetic factors were involved in the pathogenesis of DCM; therefore genetic testing is beneficial for the early diagnosis of DCM, which can facilitate the implementation of preventive measures by and within patient families. Here we investigated the underlying genetic mutations involved in the cause of patients with DCM.

METHODS This prospective study included 240 patients with idiopathic DCM and 240 healthy volunteers. Subject clinical data were collected and polymerase chain reaction amplification was carried out on subject DNA for three candidate genes tropomyosin (*TPM1*), troponin T (*TNNT2*), and lamin A/C (*LMNA*). Single nucleotide polymorphism (SNP) loci were detected in the *TPM1* (rs1071646) and *TNNT2* (rs3729547) genes respectively.

RESULTS The genotype distributions and allele frequencies were found to satisfy Hardy-Weinberg equilibrium, which indicated that the group was representative. Statistically significant differences were found between the variant frequencies in the two SNP loci between the Kazakh patients with IDCM and healthy volunteers. A significant difference in the genotype distributions (P =0.000) and allele frequencies (P =0.000) of SNP rs1071646, and another significant difference in the genotype distributions (P =0.000) and allele frequencies (P =0.039) of SNP rs3729547 between Kazaks with IDCM and Kazak controls.

CONCLUSIONS These results suggests that the *TPM1* (rs1071646) and *TNNT2* (rs3729547) gene variant might represent risk factors for patients with DCM in the Kazakh population.

GW26-e4613

The usefulness of age and gender to predict all-cause mortality in patients with dilated cardiomyopathy: a single-center cohort study

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OBJECTIVES Recent studies have shown that gender and age are associated with outcomes in patients with cardiomyopathy. The purpose of this study was to determine the all-cause mortality of dilated cardiomyopathy (DCM) by age and gender.

METHODS An observational cohort study of DCM patients was conducted from November 2003 to September 2011. During this time, 1142 patients were enrolled, with a mean follow-up period of 3.6±2.3 years. Demographic information, transthoracic echocardiography data, and routine blood test results were obtained for each patient shortly after admission. All-cause mortality after admission was the primary outcome assessed.

RESULTS The patients were divided into non-elderly (age <60 years, n =811) and elderly (age ≥60 years, n =331) groups, and no difference in the all-cause mortality rate was observed between the elderly and non-elderly patients (27.2% vs. 22.2%, log-rank χ^2 =2.604, P =0.107). Furthermore, no significant difference in mortality was observed between the male and female patients (23.3% vs. 24.5%, log-rank χ^2 =0.707, P =0.400). However, a subgroup analysis revealed that the elderly male patients exhibited a higher mortality rate than that of the non-elderly male patients (29.4% vs. 21.3%, log-rank χ^2 =5.898, P =0.015), while no difference was observed between the elderly female patients and the non-elderly female patients. In the Cox analysis, neither age nor gender was a significant independent predictor of all-cause mortality in patients with DCM.

CONCLUSIONS In conclusion, no significant difference in mortality between male and female patients or between the elderly and non-elderly patients was observed. Only among males was a difference in mortality observed; elderly male patients experienced greater mortality than that of non-elderly male patients. No effect of age or gender on all-cause mortality was observed in patients with DCM.

GW26-e0493

Clinical and cardiac magnetic resonance imaging characteristics of cardiac amyloidosis of cardiac amyloidosis

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OBJECTIVES To observe the clinical features and cardiac magnetic resonance imaging characteristics of patients with cardiac amyloidosis(CA).

METHODS Totally 79 patients with CA admitted to First Affiliated Hospital of Sun Yet-sen University from 2005 to 2014 were included. CA was confirmed by endocardium biopsy examination or had the manifestations of the cardiac magnetic resonance imaging characteristics when the patients did not have endocardium biopsy but had renal, tongue, or alimentary canal biopsy only. Clinical manifestations and cardiac magnetic resonance imaging were collected for the evaluation.

RESULTS 54 cases(68.4%) with heart failure, 39 cases(49.4%) with chest pain,60 cases(75.9%) presented with dyspnea, 20 cases (25.3%) presented with diarrhea, 26 cases (32.9%) presented with hypertrophy of tongue, and 57cases(72.2%) with renal insufficiency and proteinuria. Echocardiogram showed all of the CA patients had concentric left ventricular hypertrophy, granular appearance of the myocardium, left atrial enlargement and 56 cases (70.8%) had moderate to severe left ventricular diastolic dysfunction. Cardiac magnetic resonance imaging revealed 75 cases (94.9%) increased thickness of the left ventricular wall, 70 cases (88.6%) had enlarged bilateral auricle, and 56 cases(70.8%) had restricted left ventricular filling with normal or mild to moderate reduced systolic function.

CONCLUSIONS For patients who were with unexplained clinical cardiac failure, chest pain, renal insufficiency and echocardiogram