CONCLUSIONS Ivabradine could prevent age-related AF by down-regulating the expression of HCN channel mRNAs and proteins in the pulmonary vein and atrial tissues of dogs with age-related AF.

GW27-e0709

Effects of pacemaker implantation on sudden cardiac death rate and quality of life in atrial fibrillation patients with ventricular pauses

Li Yaodong,[1] Hong Yi-fan,[2] Ma Jian-hua,[1] Cao Gui-qiu,[1] Zhou Xian-hui,[1] Zhang Jiang-hua,[1] Xing Qiang,[1] Tang Bao-peng[1]
[1]The First Affiliated Hospital, Xinjiang Medical University; [2]Shantou Central Hospital

OBJECTIVES To investigate whether pacemaker implantation provides long-term protection against sudden cardiac death and improves quality of life in persistent atrial fibrillation patients with ventricular pauses.

METHODS This was a prospective randomized controlled study of 196 persistent atrial fibrillation patients with ventricular pauses enrolled from January 1998 to December 2004. Patients were randomized into the pacemaker group and control group. Patients in the pacemaker group were implanted with a single-chamber pacemaker in the right ventricle. The primary end point was sudden cardiac death. Quality of life was assessed using the SF-36 questionnaire.

RESULTS There was no significant difference in sudden cardiac death, cumulative survival rates, or cardiovascular events and stroke between the two groups ($P > 0.05$). In the pacemaker group, total SF-36 score was significantly higher than baseline at 5 and 10 years after implantation ($P< 0.05$), while SF-36 scores declined significantly in the control group ($P < 0.05$).

CONCLUSIONS For persistent atrial fibrillation patients with ventricular pauses, pacemaker implantation does not decrease sudden cardiac death or cardiovascular events and stroke, and does not increase cumulative survival rate. However, pacemaker implantation can improve quality of life.

GW27-e0774

Electrocardiogram Predictors of Transition from Idiopathic Outflow Tract Ventricular Premature to Monomorphic Tachycardia

Sun Yuanjun, Xianjie Xiao, Xiaomeng Yin, Dong Chang, Yingxue Dong, Lianjun Gao, Yanzong Yang, Yunlong Xia
The First Affiliated Hospital of Dalian Medical University

OBJECTIVES Our aim was to clarify the ECG predictors for the transition from outflow tract ventricular premature ventricular contraction (OT-PVC) to monomorphic ventricular tachycardia.

METHODS The PI, CI, Tp-Te, duration of QRS complex during sinus rhythm, sinus cycle length, QT index, QT interval, QTc and incidence of fragmented QRS complexes were compared between 33 patients with sustained OT-VT triggered by PVC which had monomorphic QRS morphology (VT group) and 37 patients with frequent OT-PVC (≥10% of total heart beats in 24h) (PVC group).

RESULTS No difference existed in baseline characteristics between the 2 groups. The duration of QRS complex (101.33±19.46 ms vs. 89.40±14.02 ms), Tp-Te (141.1±78.55 ms vs. 76.60±23.29 ms), PI (0.71±0.17 vs. 0.62±0.10) and QT index (1.64±0.60 vs. 1.34±0.19) in the VT group were significantly prolonged versus PVC group ($p<0.05$). Logistic regression analysis revealed that PI and Tp-Te are the determinants of transition from OT-PVC to monomorphic OT-VT (odd ratio = 270.03 and 1.025, respectively). A PI value of >0.74 predicted sustained VT with a sensitivety of 45.5% and speci?city of 89.2%, and a Tp-Te of >94ms predicted sustained VT with a sensitivety of 57.6% and speci?city of 89.2%.

CONCLUSIONS PI and Tp-Te may be the predictors of the transition from OT-PVC to monomorphic OT-VT, and OT-PVC with longer PI and Tp-Te may have a higher possibility to transform to OT-VT.

GW27-e0850

Clinical Characteristics and Treatments of Brugada Syndrome: A Retrospective Study in Chinese Population

Boshui Huang,[1] Juan Meng,[2] Ying Chen,[1] Guiyi Yuan,[1] Fasheng Liang,[1] Huayuan Zeng,[1] Juan Lei,[1] Chang Fang,[1] Shaoxin Zheng,[1] Shuxian Zhou[1]
[1]Department of Cardiology, Sun Yat-Sen Memorial Hospital, Sun Yat-San University, Guangzhou, Guangdong, China; [2]Department of Cardiology, the Third People's Hospital of Shenzhen, Shenzhen, Guangdong, China

OBJECTIVES Brugada syndrome is associated with syncope, palpitations, chest discomfort and high incidence of sudden death, displaying a ECG characteristic of a type I ST-segment elevation on precordial lead (V1 and V2). It has attracted much attention and interest worldwide since its first report by the Brugada brothers in 1992, because of its predominance in young male patients with high risk of sudden death. Brugada syndrome is seen in many parts of the world, and is reported to be more prevalent in Southeast Asia and Japan than in Europe and USA. It remains to be determined if the clinical manifestations of Brugada syndrome differ among different ethnic groups. Isolated cases of Brugada syndrome have been reported in Chinese patients, but lack of large sample clinical studies. We aimed to describe the incidence and clinical characteristics in a cohort of Chinese patients with Brugada syndrome.

METHODS Data from 182 patients with Brugada syndrome treated at Sun Yat-sen Memorial Hospital of Sun Yat-sen University or reported cases of Chinese patients by others between January 1998 to June 2015 were included.

RESULTS The ratio of male to female of Brugada syndrome was 14.7:1, and the median age was 41 years. 72.3% patients had a history of syncope with a mean age of 43.0±12.0 years and 72.9% occurred during sleep at night. 39.0% patients recorded spontaneous malignant arrhythmias, including ventricular fibrillation (23.6%), polymorphic ventricular tachycardia (14.3%), ventricular tachycardia (12.1%) and ventricular flutter (1.1%). Atrial fibrillation (14.3%), atrial flutter (9.9%) and atrioventricular block (8.2%) were recorded in Brugada syndrome patients. 71 patients underwent electrophysiological study with the positive rate of 49.3%. The positive rate of drug provocation test was 92.9%. For treatments, 101 patients should received implantable cardioverter defibrillator (ICD) implantation therapy, but only 26.7%(27/101) patients underwent ICD implantation and 59.3% patients had no medical treatments.

CONCLUSIONS Chinese patients with Brugada syndrome are predominantly middle-aged males. The main clinical manifestation is syncope and many patients suffer malignant arrhythimas. ICD implantation rate is very low and ICD for primary prevention of sudden cardiac death should carry forward in Chinese patients of Brugada syndrome.

GW27-e0869

The prevalence, incidence, risk factors and all-cause mortality of isolated left anterior hemiblock in general population: results from Kailuan study

Yang Yiheng,[1] Xu Han,[1] Binhao Wang,[1] Wenyu Li,[1] Yue Chen,[1] Shouling Wu,[2] Yunlong Xia[1]
[1]Department of Cardiology, First Affiliated Hospital of Dalian Medical University, Dalian, 116011, China; [2]Department of Internal Medicine, Kailuan Hospital Affiliated to Hebei United University, Tangshan, China

OBJECTIVES Data concerning the left anterior hemiblock (LAHB) are scarce, which suggested various results from different regions. We conducted a perspective study to investigate the prevalence, incidence and predictors of newly acquired, and the all-cause mortality of LAHB based on Chinese population.

METHODS A total of 101510 participants from Kailuan study examined 2006-2007 and performed health examinations biennially until Dec 31 2014. We identified the isolated LAHB by using a rest standard 12-leads ECG according to ECG features as Minnesota code 7-7. We integrated the detail diagnosis on ECG recording till the 4rd visit (2012-2013). Detailed information on vital status was collected during the whole period. The all-cause of death was acquired from medical insurance database and death certificate, with further confirmation by their family members or local community health center. Logistic regression was used to estimate the risk factors of LAHB. Cox regression and Kaplan-Meier survival analyses were used to calculate multivariable-adjusted hazard ratios for outcome associated with presence of LAHB.

RESULTS The baseline prevalence of LAHB is 0.7% (n=661) and significantly higher among men and aging participants ($P<0.01$). Obesity (9.7% vs 7.9%), history of myocardial infarction (3.9% vs 1.3%) were more prevalent in LAHB group ($P<0.05$). Prevalence and incidence of LAHB increased with age (gender adjusted P value<0.001). The prevalence of LAHB was higher in men (0.79% in men vs.0.15% in women, age adjusted P value<0.001), Likewise, the incidence of LAHB was significantly higher in men (1.05 per 1000 person-year in men vs. 0.25 per 1000 person-year in women, age adjusted P value<0.001). During a median of 6.3 years follow-up,