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e0547 LEFT ATRIUM FUNCTION IN PATIENTS WITH PAROXYSMAL ATRIAL FIBRILLATION: ANALYSIS FROM TWO-DIMENSIONAL SPECKLE TRACKING ECHOCARDIOGRAPHY

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Introduction To observe the changes of left atrium function in patients with paroxysmal atrial fibrillation (AF) using two-dimensional (2D) speckle tracking echocardiography (STE).
Methods The study population consisted of 33 patients with paroxysmal atrial fibrillation and 30 age, sex-matched control subjects in sinus rhythm (SR) who were referred to our echocardiography laboratory. All of the patients were in sinus rhythm when they were checked. Left atrial diameter (LAD), left atrial area (LAA), interventricular septum thickness (IVST); Left ventricular end-diastolic diameter (LVEDD) were measured in 2-dimensional echocardiography imaging. LV ejection fraction was determined. Measured mitral valve A wave velocity time integral (VTI-A) and maximum velocity (VA). LA wall strain in the longitudinal direction obtained using 2DSTE. Measured peak atrial longitudinal strain (PALS) and atrial contraction longitudinal strain (ACLS) in apical 4-chamber view and apical 2- chamber view. Measured time to peak longitudinal strain (TPLS). Δ\TPLS was defined as the difference between the TPLS in apical 4-chamber view and apical 2- chamber view.
Results There were no significant differences between the 2 groups regarding age (63±12 vs 60±9 years), sex (males 48% vs 60%) and history of hypertension and diabetes mellitus. Compared with control group, Δ-TPLS were significantly increased in AF group (52.83±32.2 vs 31.33±20.2, $p<0.05$). In Patients with AF, ACLS were significantly decreased than in control group (10.09±3.3 vs 13.74±3.1 $p<0.05$). The PALS; LAD; LVEDD; IVS; EF; VA; VTI-A and LAA between paroxysmal AF and control group did not show statisticant difference ($p>0.05$).
Conclusions 2DSTE can effectively and easily measure LA Δ-TPLS and ACLS, speckle tracking echocardiography could be a method to non-invasively assess LA function in paroxysmal atrial fibrillation patients.

e0548 CORRELATION BETWEEN APNOEA HYPOPNOEA INDEX AND SLEEPING HEART RATE IN CHINESE ADULT

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Objective To detect the correlation between apnoea-hypopnoea index (AHI) and parameters of sleeping heart rate.
Method 404 subjects who experienced polysomnography (PSG) during 2005–2008 in The Third Hospital of Peking University ENT department were included. The participants were separated as obstructive sleep apnoea-hypopnoea syndrome and normal population. OSAHS patients were divided into mild, moderate and severe group according to Chinese guideline. Max sleeping heart rate (MaxHR), min sleeping heart rate (MinHR) and difference of heart rate (max minus min, dHR) were compared between groups.
Result 1) MaxHR, MinHR and dHR were 92.00±13.11/min, 51.15±9.72/min and 40.84±12.30/min in OSAHS population. The three parameters in control participants were 87.40±11.82/min, 50.24±9.81/min and 37.16±12.35/min, respectively. Significant differences of MaxHR and dHR were detected between OSAHS group and control ones, besides MinHR. ($p_{MaxHR}=0.003$, $p_{dHR}=0.028$ and $p_{MinHR}=0.440$). 2) Positive correlation were detected between AHI and MaxHR ($r=0.320$, $p<0.001$), as well as dHR ($r=0.205$, $p<0.001$). 3) Linear regression was preformed to adjusted bias induced by sex, age or other factors. Result of regression indicated that AHI was an independent factor of MaxHR and dHR.
Conclusion The max sleeping heart rate and difference of sleeping heart rate was significantly high in OSAHS population. AHI was an independent risk factor of sleeping heart rate.

e0549 SINGLE CENTRE EXPERIENCE ON INTRATHORACIC IMPEDANCE MONITORING IN CHRONIC HEART FAILURE PATIENTS

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Objective To observe the effectiveness of intrathoracic impedance monitoring on detecting aggravation in chronic heart failure patients with InSync Sentry CRT-D.
Methods We retrospectively analysed the clinical data of 14 consecutive patients. Patients were regularly followed up every 3–6 months after the implantation. At each visit, interrogation of the device was done by specified doctors. Patients were instructed to inform the researcher in case of a device alert, and to take extra 40 mg of furosemidum if they really had aggravated symptoms later. Data about heart failure hospitalisation was collected retrospectively from the medical record.
Results During 18–48 months follow-up, a total of 7 patients encountered 28 alert events. Among the 28 alert events, 3 (10.7%) alerts were not followed by any clinical condition, and 23 (82.1%) alerts were followed by deterioration of heart failure symptoms. Besides, 2 alerts were related to the onset of pulmonary infection. In the end, only 5 patients were hospitalised 10 times for deterioration of cardiac function.
Conclusions The function of intrathoracic impedance monitoring is reliable in predicting deterioration of heart failure, so prompt medical intervention may reduce symptoms and hospitalisations due to decompensation.

e0550 RADIOFREQUENCY CATHETER ABLATION OF LEFT CONCEALED ATRIOVENTRICULAR ACCESSORY PATHWAY WITH RAPID RATE DEPENDENT VENTRICULOATRIAL CONDUCTION

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Objective To investigate the characteristics of supraventricular tachycardia affiliated with left concealed atrioventrieular accessory pathway (AP) with rapid rate dependent ventriculoatrial conduction and the experience of electrophysiological (EP) study and radiofrequency catheter ablation (RFCA) in these cases.
Methods 8 patients, 5 male, 3 female, aged from 24 to 62 years, who all had symptoms of paroxysmal palpitation and whose ECG recorded at the onset of tachycardia all manifested as narrow QRS complex, underwent electrophysiologic study and RFCA by the routine method, which including the properties of ventriculoatrial conduction while pacing (s_1s_1) were performed in right ventricular apex (RVA) and left ventricle, mapping AP and RFCA.
Result 8 cases were all left concealed atrioventrieular AP. In all patients that special kind of atrioventrieular AP with rapid rate