Pediatric Cardiology

GW25-e2373
Effect of different dose aspirin on coronary artery lesions in the acute phase of Kawasaki disease
Piao Jin-Hua, Han Yanyan, Jin Lianhua
The First Hospital of Jilin University

Objectives: To study the effect of different dose aspirin on coronary artery lesions in the acute phase of Kawasaki disease.

Methods: 142 children with primary Kawasaki disease in our hospital, from January 2010 to December 2013, were divided into two groups. A. B.145 children were in group A. In acute phase, they were given oral ASA 30-50 mg/kg/d, which was gradually reduced to 5mg/kg/d after normal temperature; 77 children were in A group. All of children were given IVIG 1 g/kg/d, for 2 days, in 5-9 days.

Results: There were 15 children (13.4%) have CAL within 1 month in total.2 cases were from group A, whose coronary artery diameters were less than 4mm; 13 cases (13.6%) were from group B. In acute phase, they were given large dose of gamma globulin (IVIG), at the same time, given oral ASA 30-50mg/kg/d, which was gradually reduced to 5 mg/kg/d. All of children were given IVIG 1 g/kg/d, for 2 days, in 5-9 days.

Conclusions: As the treatment of Kawasaki disease in acute stage, taken ASA after being given high dose IVIG can reduce the incidence of CAL, compared with the ones who taken ASA and IVIG at the same time.

GW25-e3355
Artesunate enhances the efficacy of amiodarone for cardioversion of paroxysmal supraventricular tachycardia
Zeng Aihong1, Ou Yang-Ying1, Guo Ming-Ming1, Dai Xuan1, Zhou De-Zhi2, Zhou Hong1
1The First Affiliated Hospital of Sun Yat-Sen University, 2The Second Affiliated Hospital of Sun Yat-Sen University

Objectives: To compare the safety and efficacy of Artesunate (ART) added to amiodarone vs. amiodarone alone for children with paroxysmal supraventricular tachycardia (PSVT).

Methods: 34 children with PSVT aged 1 to 14 years were recruited and randomly assigned into experimental group (n=16) or control group. (n=18). Patients of control group received amiodarone infusion (loading dose 5 mg/kg followed by maintenance dose of 10-15mg/kg/d, n=16), experimental group received amiodarone infusion at the same dosage plus a single dose of ART 1.5 mg/kg, n=15). All patients were treated with oxygen inhalation, ECG monitoring, sedative treatment according to the condition of patients.3 patients with spontaneous cardioversion were excluded. The plasma natriuretic polypeptide (ANP) and cardiac index (CI) were measured before, during, and after tachycardias occurred.

Results: Patients in the amiodarone plus artesunate group compared with the amiodarone-only group showed significantly higher cardioversion rate at 24 h (90.2±9.5% vs. 80.8±9.2%, P=0.001) and shorter time to cardiovascular (800.2±50.4 vs. 980.8±90.2 seconds; P=0.001). The plasma natriuretic polypeptide (ANP) and cardiac index (CI) returned to normal after treatment in both the groups, whereas ANP and CI were still higher than normal among patients with unsuccessful cardioversion.

Conclusions: Addition of artesunate to amiodarone was safe and well tolerated in this research, and it demonstrated efficacy superior to amiodarone alone for conversion of PSVT. ART can be employed as a new therapy strategy for many patients.

GW25-e3195
Clinical analysis of allergic purpura with cardiac damage
Zhou Yan, Liu Congcong, Piao Jinhua, Yang Sirui
Department of Pediatric Cardiology, The First Affiliated Hospital of Jilin University

Objectives: Allergic purpura (Henoch-Schonlein purpura, HSP) is the most common vasculitis in the small blood vessels as the main pathological changes in childhood. The main clinical manifestations of HSP include rash, gastrointestinal symptoms, joint pain, kidney damage, other damage may also occur in heart, brain, liver, pancreas, lungs and other organs. The majority of cases present benign self-limiting process, but severe cases can be life-threatening. This study aimed to investigate the incidence, clinical features, diagnosis and prognosis of HSP with heart damage.

Methods: We collected 210 cases of children diagnosed with HSP enrolled in our hospital during January 2010 to August 2013. It is about 113 boys, aged 4-14 years (average age: 7.8 years), 97 girls, aged 3-14 years (average age:6.2 years), and based on clinical manifestations, divided into 31 cases of simple skin type, 41 cases of joint type, 37 cases of abdominal type, 16 cases of renal type, 85 cases of mixed type. Count up the children with the changes of myocardial enzymes including create kinase isoenzyme, troponin, myoglobin change, ECG, echocardiography, and get rid of children with a history of arrhythmia disease, such as myocarditis, cardiomyopathy, arrhythmia, congenital heart disease and other structural heart disease.

Results: 210 cases of HSP patients are with 46 cases (21.9%) cardiac damage, including 1 case of skin type (3.2%), 5 cases of joint type (12.2%), 8 cases of abdominal type (21.6%), 4 cases of renal type (25%), 28 cases of mixed type (32.9%), 46 cases with cardiac damage include abnormal myocardial enzymes (9 cases), ECG abnormalities (35 cases), sinus bradycardia (15 cases), atrioventricular block (9 cases), ST-T changes (6 cases), premature (5 cases). Echocardiography (left ventricular diameter increases) abnormal (1 case). After the treatment of anti-allergy, improving circulation, providing nutrition to myocardial, 41 patients with cardiac damage return to normal.

Conclusions: Heart damage in HSP patients can often occur in mixed type, followed by abdominal type and kidney type. The more severe the disease is, the greater the chance of cardiac involvement. ECG abnormalities is the most common heart damage, including sinus bradycardia and atrioventricular block. To strengthen the clinical importance of HSP with cardiac damage, to give the early diagnosis and aggressive treatment, most cases can get good prognosis.

GW25-e2358
Tachycardia induced cardiomyopathy in children: a report of 20 cases
Zhang Wenhua, Piao Jinhua, Zhou Yan
The First Hospital of Jilin University

Objectives: Explor the clinical characteristics, therapeutic regimen and outcome of TIC in children of different ages.

Methods: 20 children with TIC, from the First Hospital of Jilin University from January 2007 to November 2013, were retrospectively analyzed the clinical manifestations, auxiliary examination, treatment, follow up.

Results: Of 20 cases of TIC, from 16 days to 15 years old, 13 cases of male ang female were 7 cases (the difference was statistically significant). 11 were in infancy/ male/female=7:4, 1 was in toddler period/female, 4 were in pre-school age (male), 4 were adolescence/male/female=3:1. Arrhythmia types in infancy were atrial tachycardia(AT) in 7 cases, paroxysmal supraventricular tachycardia(PVST) in 3 cases, ventricular tachycardia(VT) in 1 case. All cases in toddler period and pre-school age were AT. In adolescence 2 cases were AT and 2 were PSVT. All patients in infancy, toddler period and pre-school age were treated with drugs first. All infancy cases restored sinus rhythm. 1 toddler case obtained ventricular rate control. In pre-school age 1 case restored sinus rhythm and 2cases obtained ventricular rate control,1 case failing to drugs underwent radiofrequency ablation and get cured. 1 case in adolescence obtained ventricular rate control with drugs, another three patients underwent radiofrequency ablation after admission and all got cured.

Conclusions: TIC was more common in infancy, pre-school age and adolescence. AT was the dominant arrhythmia type and followed by PSVT. Drug therapy was used for children with TIC and infancy patients responded best to drugs. Radiofrequency ablation was an alternative for pre-school and adolescent patients who failed to drug therapy.

Cardiovascular Surgery

GW25-e5229
Robotic Cardiac Surgery in China: 7-year Single-center Experience and Follow-up
Gao changqing, Changqing Gao, Ming Yang, Cangsong Xiao, Gang Wang, Yang Wu, Jiuli Wang, Yao Wang, Rong Wang, Bojian Li, Jiachuan Li, Lixia Li, Yue Zhao
PLA General Hospital

Objectives: This article aims to summarize the experience of 700 cases of robotic cardiac surgery with 7-year follow-up results revealed.

Methods: A total of 700 patients underwent robotic cardiac surgery using da Vinci Surgical System from January 2007 to May 2014 in PLA General Hospital. There were 321 male and 271 female with a median age of 49 years old (11-80). With left port approach, 240 cases of robotic coronary artery bypass graft were completed, including totally endoscopic coronary artery bypass graft on beating heart (BHTECAB, n=100) and minimally invasive direct coronary artery bypass graft on beating heart (MIDCAB, n=140). The patients with multiple-vessels coronary artery disease received PCI after robotic coronary surgery in separate session (hybrid coronary bypass revascularization, n=35) to achieve complete revascularization. The graft patency was evaluated by CTA or coronary angiography before discharge, at 3, 6, 12 months, and up to 5 years postoperatively. With the initial approach, atrial septal defect repair on arrest or beating heart (n=180), ventricular septal defect repair (n=25), mitral valve plasty (n=100), mitral valve replacement (n=50), atrial myxoma resection (n=50), were completed under cardiopulmonary bypass with cannulation in femoral artery, into femoral vein and right internal jugular vein. Patients were followed up to obtain clinical and echocardiographic status at 6 months, 1 year, 3 years and 5 years postoperatively.