ABSTRACTS

Abstracts for Poster Session:

P1.

Evaluation of Pulmonary Blood Supply and Pulmonary Artery in Children with Complex Congenital Heart Disease by 64-detector Row Computed Tomography

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Objective: To assess the feasibility of 64-detector row computed tomography (64-MDCT) for the analysis of pulmonary blood supply and evaluation of pulmonary artery morphology in children with complex congenital heart disease such as tetralogy of Fallot (TOF) and pulmonary atresia (PA).

Methods: Fifty-four patients with TOF, and/or PA underwent 64-MDCT and conventional angiography. The pulmonary blood supply was investigated. The diameters of the left, right pulmonary arteries, and the stenoses were measured respectively. The images were analyzed by two independent observers.

Results: 64-MDCT accurately revealed the pulmonary arteries, PDA, and the origin, course of APCAs as compared to conventional angiography. Pulmonary blood flow was from ventricle in 31 cases, from PDA (and/or APCAs) in 17 cases, and from both in 6 cases. Twenty pulmonary arteries stenoses were correctly detected by MDCT, among which 1 was misdiagnosed by conventional angiography. Excellent correlation was observed between 64-MDCT and conventional angiography in quantifying the diameters of the left (r=0.90, p=0.000), right pulmonary arteries (r=0.91, p=0.000), and stenotic segments (r=0.86, p=0.000).

Conclusion: This study demonstrates that MDCT is feasible in assessing pulmonary blood supply and the pulmonary artery morphology.

P2.

Radiofrequency Catheter Ablation of Frequency Premature Ventricular Contractions Guided by Contact Mapping or Non-contact Mapping in Pediatric Patients

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Objective: To investigate the effect and indication of Radiofrequency Catheter Ablation (RFCA) by contact mapping or non-contact mapping on Frequency Premature Ventricular Contractions (PVCs) in pediatric patients.

Methods: Eight pediatric patients with PVCs in pediatric patients without structural heart diseases. All of patient's Holter: PVCs 30000±8465/24h. Guided by non-contact mapping, Radiofrequency Catheter Ablation was performed on 4 patients [mean age (11.3 ± 1.2) years], 2 patients with PVCs originating from the right Ventricular outflow tract, and 2 patients with PVCs originating from the right Ventricular inflow tract. Guided by contact mapping, Radiofrequency Catheter Ablation was performed on 4 patients [mean age (8±2) years], 2 patients with PVCs originating from the right Ventricular outflow tract (RVOT), 1 patient from the right Ventricular inflow tract (RVIT), and 1 patient from the left Ventricular outflow tract (LVOT). We calculated the fluoroscopic time, the complications, and the indication to select. All patients received 24-hour Holter ECG monitoring before RFCA, one and three months after RFCA.

Result: PVCs were successfully ablated in 8 cases. No ablation-related complications happened, 1 patient with PVCs originating from LVOT recurred one month after RFCA, and need a second successful ablation. After follow-up of 3 months, Holter records of the successfully ablated patients indicated PVC 0~5 ↑ /24h. In non-contact mapping group, the fluoroscopic time of ablation PVCs originating from RVOT was 16.5 min vs 32.5 min, from RVIT was 26.5 min vs 60 min. In contact mapping group, the fluoroscopic time of ablation PVCs originating from LVOT was 90 min.

Conclusion: Non-contact mapping has many advantages than contact mapping, such as shortened the fluoroscopic time, but it also has some limitations, contact mapping has wide adaptability, it can be the foundation and supplement of Non-contact mapping, especially in case of failure of ablation by non-contact mapping.

ABSTRACTS

Abstracts for Poster Session:

P3.

The clinic study of head-up tilt table test in children with unexplained syncope

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Objective: To evaluate the diagnostic value and security of the head-up tilt table test (HUTT) in children with unexplained syncope and to study the change of plasma nitric oxide (NO) during HUTT.

Methods: Forty-six patients (21 male and 25 female, mean age 11.6±2.4 years, ranged from 7 to 16) with unexplained syncope and fifteen healthy children in control group (6 male and 9 female. mean age 12.4±3.1 years, ranged from 8 to 15) were studied .The patients and healthy children were tilted upright to 70 degrees for 45 minutes at the base-HUTT. If syncope did not occur, sublingual nitroglycerin (3μg/kg, maximum dose 300 μg) was administered. and continued at same degree for 20 minutes. Plasma NO was measured before and during the HUTT.

Results: 25 patients (54.30%) were positive response to HUTT.20 (80%) of them was diagnosised for vasovagal syncope (VVS) before HUTT. For all the positive patients, 6 (24%)had syncope, 21 (85%) had precursor syncope. 4 happened faint when precursor syncope appeared. 2 became shock. The recovery time (consciousness, blood pressure, heart rate etc) for patients with syncope was about 1-6 minutes (average 2.8 ± 1.9 minutes), for precursor syncope patients was about 2.1 ± 1.0 minutes, of them 48 % recovered in one minute, 24% in the 5 minutes ,28% of them within 10 minutes .The level of NO in positive group (10 cases) and negative group (10 cases) was no difference before HUTT (76.7 ± 9.6μmol / L vs 84.3 ± 10.3μmol / L, P = 0.565) ,and was relatively higher than that in negative group during HUTT, but no statistical significance (90.0 ± 11.4 vs 80.3 ± 9.1μmol / L, P = 0.512) . In positive group, the concentration of NO was significantly increased during HUTT (90.0±11.4 vs 76.7±9.6μmol/L, P=0.043) , but in negative group was no significant difference (80.3±9.1 vs 84.3±10.3μmol/L, P=0.073).

Conclusion: HUTT is a useful and safety diagnostic tool in children with VVS . NO may have a role on the pathogenies of VVS.

P4.

Therapeutic Efficacy Analysis of Kawasaki Disease with Different Ages and Therapy

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Purpose To approach the short-term therapeutic efficacy of Kawasaki disease by different therapy, and the efficacy in different ages.

Methods Retrospective analyze 68 children in the first Affiliated Hospital of Sun Yat-sen University from January 2006 to May 2008. First, divide the 68 children into 2 groups according to different administration of intravenous immuno -glublin (IVIG), and compare the recovery time of clinical symptom, the peripheral white blood cells (WBC), C-reactive protein(CRP), erythrocyte sedimentation rate(ESR) and the recovery of coronary artery with each other by SPSS12.0 software. Then, according to different ages we divided the 68 children into 3 groups: < 3years ,3-5years , > 5years , to compare the above indexes again during the groups also by SPSS12.0 software.

Results With different IVIG use, there were no statistical difference between the 2 groups in the recovery time including fever, conjunctival congestion, chilo-rhagades, rash, acro-swell, lymphadenectasis, and the recovery of WBC, CRP, ESR after 2 weeks' therapy, the coronary artery. While to children of different ages, there are also no statistical difference in the recovery of above clinical indexes, WBC and CRP, but in the descending rate of ESR and the recovery of coronary artery, group 3(> 5years) were worse than the other two groups.

Conclusion The IVIG administration in KD, 2g/kg used in 1d or 2d, makes no statistical different efficacy. There's different efficacy in children with different ages, and the short-term efficacy tends to be better in children younger than 5years.

P5.

A study on prognosis and treatment of dilated cardiomyopathy in pediatric patients

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Purpose To assess the prognosis of dilated cardiomyopathy(DCM) in children and to evaluate the effect of IVIG on pediatric patients with DCM.

Methods Thirty–four patients were enrolled, and they were divided into conventional treatment group and IVIG group (conventional treatment plus large dose IVIG) . Statistical analysis were carried out in SPSS13.0 software. Life table and Kaplan-Meier analysis were used to analyze the survival and the comparison of treatment effect between two groups. $P<0.05$ is statistically significant.

Results Conventional treatment group had 16 cases(male 10 and female 6) aged from 7 month to 14 years old (median 7.8 years) ,and IVIG group had 18 cases(male 11 and female 7) aged from 9 month to 12 years old (median 7.5years) . From the enrolled patients were diagnosed and treatment, eight patients（23.5%） died and five-year survival rates was 48%, while five-year survival rates group was longer than that of patients in conventional treatment group, both application of vasoactive agents and hospitalization times were fewer in IVIG group than those of patients in conventional treatment group ($P<0.05$).

Conclusion The prognosis of DCM in pediatric patients is not good. Application of large dose IVIG is beneficial to the patients with DCM in children.