RESULTS The incidence of preoperative AKI is 36.8%. In-hospital complications was significantly higher in patients with preoperative AKI (50.0% vs 4.2%, p<0.001), including acute renal failure (21.43% vs 0%, p<0.001), and it increased with severity of AKI (p<0.001). The maximum levels of body temperature, white blood cell count were significantly related to maximum serum creatinine level before TEVAR. Multivariate analysis showed that systolic blood pressure on admission (odds ratio, 1.023; 95% confidence interval, 1.007-1.039) and bilateral renal artery involvement (odds ratio, 19.076; 95% confidence interval; 1.942-190.763) were strong predictors for preoperative AKI.

CONCLUSION Preoperative AKI frequently occurred in patients with type B AAD, and was correlated with higher in-hospital complications and enhanced inflammatory reaction. Systolic blood pressure on admission and bilateral renal artery involvement were major risk factors for AKI before TEVAR.

PEDIATRIC CARDIOLOGY

GW26-e4627 A national survey of fetal congenital heart diseases in China
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OBJECTIVES Congenital heart disease is the most common cause of birth defect; however, the incidence of CHD in fetus is quite different from that of neonates. We performed a national survey to assess the incidence of fetal CHDs in China, along with its association with extra-cardiac defects and chromosome abnormalities.

METHODS 56 hospitals from 26 provinces were enrolled in this survey. All fetuses between January 2011 and December 2013 had been registered and were analyzed retrospectively, which included maternal age, history of gestation, gestation weeks, high risk family factors, results of early pregnancy screening (nuchal translucency, NT), type of congenital heart defect, associated abnormalities and results of follow-up. The cardiac screening examination is performed using four-chamber view and outflow tract views. Categorical data were compared using Pearson Chi-square analysis. Relationship between incidence parameter and GDP was assessed by simple linear regression analysis.

RESULTS A total of 12,270 fetuses with CHD were detected in this survey. The incidence of CHDs was 14.2 per 1,000 birth. CHD incidence in East China (12.75 per 1,000 birth) was significantly higher than that of Middle China (15.50 per 1,000 birth) and West China (14.93 per 1,000 birth) (P<0.01). The 5 most common fetal congenital heart diseases in China were as following in turn: Ventricular septum defect, Atrial septum defect, Tetralogy of Fallot, Double Outlet Right Ventricle, and Transposition of the Great Arteries. 3,647 fetuses (29.72%) in the CHD group were associated with extra-cardiac abnormalities, and the most common chromosomal abnormalities were trisomy-21, trisomy-18 and 46,XY,XQ, partial deletion of chromosome. Final diagnoses were available in 4,833 fetuses either by postnatal echocardiography, or autopsies after termination. 2,079 (56.1%) were in good agreement with the prenatal diagnosis, and 2,071 (42.9%) were partially in agreement with the prenatal diagnosis. However, the prenatal diagnosis was incorrect in 52 fetuses (1.0%).

CONCLUSIONS This is the first national survey to assess the incidence of CHD before birth in China. While more and more CHD are being detected before birth, other service such as chromosome examination and associated counseling, should keep pace with the development.

GW26-e4764 Predictors of Survival in Pediatric Patients With Idiopathic Pulmonary Hypertension
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OBJECTIVES The aim of this study is to assess predictors of survival in pediatric patients with idiopathic pulmonary arterial hypertension (IPAH).

METHODS Patients (under 18 years of age) admitted to Department of Pediatric Cardiology of Beijing Anzhen Hospital between January 2010 and December 2014 with confirmed IPAH were enrolled. All the patients were arranged to receive laboratory tests, echocardiography and cardiac catheterization respectively. The clinical data with follow-up information on therapy effect and prognosis were collected. The baseline clinical data were analyzed and survival curve was drawn. The patients were arranged into two groups according to survival and possible predictors of survival were identified.

RESULTS Between January 2010 and December 2014, 38 pediatric patients with a diagnosis of IPAH were enrolled. The mean age was (7.3±4.2) years (from 0.8-18.3 years) and the average time from appearing symptom to diagnosis was 16.8 months. The incidence of syncope, hemoptysis and edema of lower extremity were 42.1%, 10.5%, 15.8% respectively. 47.4% of patients were with NYHA FC III-IV. 78.9% of the patients received PAH targeted therapy and other treatment choices. NYHA functional class (P=0.025), RR=4.981, SPAP measured by echocardiogram (P=0.007, RR=1.039), red cell distribution width (RDW) (P=0.014, RR=1.287), direct bilirubin (P=0.021, RR=1.404), TFR (P=0.032, RR=1.048) and PVRI (P=0.037, RR=1.072). In multivariate analysis, NYHA functional class (P=0.019, RR=10.94), PVRI (P=0.022, RR=1.202), SPAP estimated by echocardiogram (P=0.036, RR=1.033), RDW (P=0.007, RR=1.439) were independently predictive factors for IPAH.

CONCLUSIONS Pediatric IPAH usually has diverse symptoms and a poor prognosis. Progressive right heart failure was main cause of death. The echocardiography combined with PAH testing has important value in severity estimation and treatment choices. NYHA functional class, PVRI, SPAP estimated by echocardiogram and RDW were independently predictive factors for IPAH.

GW26-e4650 Prenatal diagnosis of Ebstein’s anomaly by fetal echocardiography and additional information provided by spatiotemporal image correlation with tomographic ultrasound imaging (STIC-TUI)
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OBJECTIVES To summarize the sonographic manifestations of fetal Ebstein’s anomaly and to investigate the additional information provided by spatiotemporal image correlation with tomographic ultrasound imaging (STIC-TUI).

METHODS This study analyzed 7 cases of fetal Ebstein’s anomaly between 24 and 35 weeks’ gestation. The position, morphology and activity of tricuspid valve, degree of tricuspid regurgitation, size of atrialized right ventricle, cardiac axis and cardiothoracic ratio, together with associated intracardiac/extracardiac abnormalities and abnormal blood flow were all observed in this research. Prenatal two-dimensional echocardiography (2DE) combined with the application of STIC-TUI was performed in 6 cases. A series of four chamber view sections were obtained by STIC-TUI technology. The distance between the septal hinge points of tricuspid and mitral valve was measured in each section to acquire the maximum length. The consistency of 2DE and STIC-TUI in the evaluation of maximum distance of tricuspid valve downward displacement was analyzed by Bland-Altman method.

RESULTS Seven fetuses of Ebstein’s anomaly were diagnosed by 2DE, 6 cases of which were diagnosed by 2DE combined with STIC-TUI, and 2 cases were confirmed by autopsy. All 7 cases manifested typical sonographic features: ① All cases presented varying degrees of apical displacement and dysplasia of septal tricuspid leaflet (and posterior leaflet), with the maximum downward distance ranging from 0.61cm to 1.21cm. ② All cases displayed moderate to severe tricuspid regurgitation, with peak reflux velocity of 1.6~3.9m/s. ③ All cases showed enlargement of right atrium secondary to atrialization of the right ventricle inflow. ④ Fetal cardiothoracic ratio was greater than 0.5 in all cases, with the transverse diameter ratio ranging from 0.50 to 0.70. ⑤ Five cases manifested cardiac axis abnormalities, including left deviation in 4 cases and right deviation in 1 case. ⑥ Six cases had associated intracardiac anomalies and abnormal blood flow, including 2 cases and 1 suspected case with pulmonary artery stenosis, 2 cases with muscular ventricular septal defect, 1 case with reverse flow in the ductus venous during atrial systole, and 1 case with mild to moderate mitral regurgitation. ⑦ One case accompanied with extracardiac