Conclusions: To our best knowledge, this was the first multi-centered in this field, and also the first study of its nature in the locality. Expanding the existing body of evidence, this retrospective observational study demonstrated that echocardiographic and clinical improvements after ASD occlusion are significant even if it is done after the age of 60. These improvements on pulmonary hypertension, RV dilation, and subjective symptoms were achieved to a similar magnitude in both age groups. The procedure could safely be performed in these geriatric patients and the incidences of complications such as new onset atrial arrhythmias were not different from the younger age group. Thromboembolism or bleeding complications are rare, and were not recorded in the older age group in this study. ASD occlusion should therefore be recommended to eligible patients, even after the age of 60.

TCTAP A-057
The Predictors of Atrial Septal Defect Occluder Dislodgement - A Comparative Study Between Adult and Children
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Background: Percutaneous device closure for atrial septal defects (ASDs) has emerged as an alternative to traditional surgical closure. There are still many concerns about the adverse events during procedure such as ASD occluder dislodgement. However, information about the predictors of ASD occluder dislodgement remained limited. The aim was to determine the predictors for ASD occluder dislodgement for adult and children patients in our hospital.

Methods: From June 2003 to June 2013, 115 adults and 98 children patients were diagnosed with ASD and offered transcatheter closure of their defects using atrial septal occluder (ASO). The ASO was implanted under transesophageal echocardiographic guidance if (TEE) guidance.

Results: The ASD dislodgement rate was 4.7% (10/213). In the population of dislodgement, seven cases were adult and three were children. The patient was then referred to surgery if ASD dislodged. The thicker the least thickness of any rim was, the more the ASO dislodged (p <0.005). The least rim thickness of ≥1.38mm had the best sensitivity and specificity using receiver operating characteristic (ROC) curve analysis (p=0.026). The correction of the least thickness of any rim by body surface area (BSA) was also found to present statistical significance in adults and children. The results of multivariate analysis demonstrated that high QP/Qs, Qp or oesophageal rim post-implantation and the least rim thickness were independent predictors for ASD dislodgement (p<0.05).

Conclusion: Percutaneous device closure of atrial septal defects (ASDs) is safe and effective at current era. Qp/Qs, the least rim thickness and floppy and erosion of the rim could predict ASD dislodgement.

TCTAP A-058
Stent Fenestration of the Atrial Septum in Patients with Idiopathic Pulmonary Hypertension
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Background: Pulmonary arterial hypertension is characterized by a progressive increase of pulmonary vascular resistance and ultimately leads to the development of right ventricular failure. Natural course of the idiopathic pulmonary hypertension is marked by a rapid pace and from the moment of establishing the diagnosis, without administering specific drug therapy, is less than 3 years. It is proved that the presence of the foramen ovale in patients with primary pulmonary hypertension improves the prognosis of the disease and increases the life span.

Methods: 42 patients with primary pulmonary hypertension underwent transcatheter creation of the interatrial septum fenestration through stenting in The Bakoulev Scientific Center for Cardiovascular Surgery (Bakuolle CVCS). The age of the patients ranged from 5 to 44 years (average 16.2 ± 7.8). 20 patients had III heart failure functional class, 22 patients had IV functional class. The systolic pressure in the pulmonary artery ranged from 80 to 188 mmHg (average 105 ± 45), in the right atrium - from 10 to 18 (average 15 ± 2) while the oxygen saturation of the arterial blood ranged from 88% to 94% (average 90 ± 2%). All interventions were performed under general anesthesia and transesophageal echocardiographic control. In 28 cases high glass-type stenting of the interatrial septum fenestration (ISF) was performed with the Palmaz Balloon-Expandable Stents of 270 and 36.0 length. In 12 cases stenting without modification of the stent was performed with 6-7 mm diameter and 3-4 cm length peripheral stents.

Results: In 95.3% of cases interventions and creation of the ISF from 5.0 to 8.0 mm in diameter were successfully performed. ISFs were created with the diameter of 5.0 mm in 15 patients, of 6.0 mm - in 21 patients, and of 8.0 mm - in 4 patients. Increase in the pulmonary artery systolic pressure on the average from 105 ± 45 to 125 ± 40 with a slight decrease in oxygen saturation of the arterial blood (90 ± 2 to 89 ± 2%) was observed in all patients immediately after the intervention.

In a long-term period 33 patients were examined within the period from 5 months to 8 years (average 31.3 ± 14.2 months). Improvement in the clinical condition and quality of life of the patients is observed in most cases. Thus, 17 patients were released to II functional class, 11 patients - to III functional class, and 2 patients - to IV functional class. At the same time an increase from 163 ± 54 to 294 ± 38 mm Hg was observed according to the 6-minute walk test results. Long-term mortality was 9.1% (n = 3).

Conclusion: Stent fenestration of the interseptal septum in patients with idiopathic pulmonary arterial hypertension improves the quality of life of patients, besides, it allows increasing the patient’s life span, and it can be a bridge to lung or heart-lung transplantation.