Transoesophageal echocardiographic assessment of infective endocarditis in grown-up congenital heart disease.

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Although a relatively rare problem, infective endocarditis is one of the most dreaded complications of structural grown-up congenital heart disease (CHD). Development of new techniques, specially transoesophageal echocardiography improved the possibility to diagnose vegetations and recognize their complications at patients with CHD.

Aim: to evaluate grown-up CHD infective endocarditis (IE) and their complications using multiplane transoesophageal echocardiography (TEE).

Material and methods: We studied a number of 51 consecutive patients (36 M, 15 F), mean age 32.2 y (range between 15-47 y) with CHD and IE (Duke modified criteria) examined by TEE between 1996-2002. Type of CHD, localization, eventually second localization of vegetations and their complications found on TEE were noted.

Results: From 2446 TEE exams performed, 134 pts (5.47%) had IE and vegetations on TEE. CHD and vegetations were found in 51/134 pts (38.05%). The remaining 83 pts with vegetations on TEE (61.95%) had IE on rheumatic or degenerative aetiology. In CHD vegetations were found on bicuspid aortic valve -22 pts (43.13%), valvular and subvalvular congenital aortic stenosis - 1 pt (1.96%), prolapsed mitral valve-13 pts (25.49%); hypertrophic cardiomyopathy and mitral regurgitation was found in 2 pts (3.12%), VSD in 16 pts (31.37%), ASD in 4 pts (7.84%) (2 pts ostium secundum and 2 pts atrio-ventricular canal), PDA in 2 pts (3.12%), Fallot- 1 pt (1.96%) and Ebstein and tricuspid regurgitation-1 pt (1.96%). A second localization of vegetations was found in 8 pts (15.68%)-6 pts with VSD (1 vegetation on the each side of interventricular septum, in 3 vegetations on tricuspid valve and on pulmonary valve, and 3 vegetations on the right side of VSD and at the level of an aortic regurgitant valve): 1 pt had vegetation on aortic stenotic valve and a second localization on a LVOT hypertrophy. In a Fallot pt vegetations were found on tricuspid and pulmonary valves.

Ruptured valves and acute heart failure were noted in 14 pts (27.45%); ruptured valves were: 7 prolapsed mitral valves, 5 bicuspid aortic valves and 1 tricuspid valve in a Fallot pt. Abscesses were found in 7/13.72% pts, 5 in pts with aortic bicuspid and 2 on prolapsed mitral valve.

Conclusions: The incidence of IE on uncorrected grown-up congenital heart disease is still high. Transoesophageal multilane echocardiography is a very valuable second localization of vegetations and their complications found on TEE were noted.

Transcatheter closure of atrial septal defect (ASD) is increasingly performed as an alternative to corrective surgery.

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Results: From 2446 TEE exams performed, 134 pts (5.47%) had IE and vegetations on TEE. CHD and vegetations were found in 51/134 pts (38.05%). The remaining 83 pts with vegetations on TEE (61.95%) had IE on rheumatic or degenerative aetiology. In CHD vegetations were found on bicuspid aortic valve -22 pts (43.13%), valvular and subvalvular congenital aortic stenosis - 1 pt (1.96%), prolapsed mitral valve-13 pts (25.49%); hypertrophic cardiomyopathy and mitral regurgitation was found in 2 pts (3.12%), VSD in 16 pts (31.37%), ASD in 4 pts (7.84%) (2 pts ostium secundum and 2 pts atrio-ventricular canal), PDA in 2 pts (3.12%), Fallot- 1 pt (1.96%) and Ebstein and tricuspid regurgitation-1 pt (1.96%). A second localization of vegetations was found in 8 pts (15.68%)-6 pts with VSD (1 vegetation on the each side of interventricular septum, in 3 vegetations on tricuspid valve and on pulmonary valve, and 3 vegetations on the right side of VSD and at the level of an aortic regurgitant valve): 1 pt had vegetation on aortic stenotic valve and a second localization on a LVOT hypertrophy. In a Fallot pt vegetations were found on tricuspid and pulmonary valves.

Ruptured valves and acute heart failure were noted in 14 pts (27.45%); ruptured valves were: 7 prolapsed mitral valves, 5 bicuspid aortic valves and 1 tricuspid valve in a Fallot pt. Abscesses were found in 7/13.72% pts, 5 in pts with aortic bicuspid and 2 on prolapsed mitral valve.

Conclusions: The incidence of IE on uncorrected grown-up congenital heart disease is still high. Transoesophageal multilane echocardiography is a very valuable method in assessing vegetations, multiple localization and complications of IE (valve rupture, abscesses) in uncorrected grown-up CHD endocardios.

Hemopericardium as late complication following device closure of secundum atrial septal defect.

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Transcatheter closure of secundum atrial septal defect (ASD) using Amplatzer occluder is effective treatment method with extremely rare complications. Hemopericardium have occurred in only few cases in adults. The explanation is that the edge of the device can induce the erosion of the left atrial wall and the aorta. Typically, it occurs in absence of aortic rim. We present a case of severely symptomatic patient with tamponade due to hemopericardium related to device closure of ASD.

52 yrs old woman underwent transcatheter closure of secundum ASD (diameter of 16mm) with Amplatzer occluder (N. 24) 36 month ago. Aortic rim was 3mm. The 3 yrs follow-up was eventfree, the symptoms and signs of right ventricle overload disappeared. A tort she was syncopated and severely hemodynamic compromised. Emergency echocardiography revealed tamponade, occluder correctly placed. Immediate pericardial centesis was performed, 500ml of blood was evacuated. Due to high suspicion of late complication on device closure patient was refered to surgical care unit patients.

Conclusion: These data suggest that TTE with VU may improve their diagnostic value in proximal or lobar PE. However, it seems that this combined strategy fails in distal PE and should be mostly recommended in a population of resting intensive care unit patients.