ABSTRACTS OF THE 19TH CONGRESS OF ECHOCARDIOGRAPHY

Poster session: Transesophageal echocardiography

Mediastinal recenteration after pneumonectomy by intrathoracic positioning of a mammary prosthesis, guided by transesophageal echocardiography

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Objectives.— The playpnea-orthodeoxy syndrome (POS) is described in literature and characterized by dyspnea, hypoxemia and desaturation in the upright position. It is caused by mechanical obstruction of the inferior vena cava (IVC), by mediastinal shift, after pneumonectomy.

Materials and methods.— We report on a 32-year-old patient who underwent a right pneumonectomy for recurrent severe pulmonary infection after destruction of the lung by tuberculosis. Six months later, the patient suffered from dyspnea and orthostatic vertigo. The perfusion scintigraphy of the lung excluded a shunt. Right heart catheterization excluded pulmonary hypertension and showed negative diastolic pressures in the cardiac cavities and a positive central venous pressure in the IVC. A cardiac MRI (cine MR, velocity encoded MR) showed a right-sided mediastinal shift with compression of the IVC and stenosis of the innominate vein, resulting in a significant postural decrease of venous return. Surgical mediastinal repositioning by intrathoracic positioning of an inflatable breast prosthesis was planned.

Results.— Intraoperative transesophageal echocardiography (TEE) confirmed collapse of the inferior vena cava (0.5 cm internal diameter) at the intrathoracic level with elevated flow velocities (75.1 cm/s), measured with pulsed wave Doppler at the cavo-arterial junction. After positioning of the intrathoracic prosthesis, IVC diameter and flow velocities were measured during inflation of the prosthesis. Based on these measurements, the prosthesis was finally inflated to a total volume of 620 ml, resulting in an internal diameter of the IVC of 1.3 cm and flow velocities of 14.1 cm/s.

Conclusion.— The use of intraoperative TEE allowed for the confirmation of the anatomical and functional findings of preoperative cardiac MRI in this rare complication of pneumonectomy. Furthermore, we successfully used intraoperative TEE to evaluate and guide mediastinal repositioning.

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Tee-detected left atrial thrombogenic milieu is associated with increased cardiovascular events in patients with non valvular atrial fibrillation

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Background.— Transesophageal echocardiography (TEE) can detect left atrial thrombus (LA) and dense LA spontaneous echocardiographic contrast (SEC) which have been associated with a higher risk of thromboembolism. Scarce data are available regarding their predicting value with regard to hard events including death. We hypothesized that TEE-detected LA thrombogenic milieu could predict cardiovascular events in AF in addition to clinical risk stratification.

Methods.— In 89 consecutive patients hospitalized for non valvular AF, TEE was systematically performed within 24H after admission. All patients were followed-up (mean 1.7 ± 0.6 years) and cardiovascular events (stroke, death, heart failure or acute coronary syndrome, ACS) were recorded.

Results.— Mean age was 67 ± 14 years. Fifty-four patients (61%) had hypertension, 22 (25%) had diabetes, 30 (34%) had prior history of AF, 33 (37%) had congestive heart failure and two (2%) had a history of stroke. LA thrombus was found in five patients (6%), LA dense SEC in 29 (33%), thus defining LA thrombogenic milieu in 29 patients (33%). Seventy-six patients (85%) were prescribed warfarin and 27 patients (27%) aspirin at discharge. At follow-up, death occurred in nine patients (10%), cardiovascular death in five (6%), stroke in two (2%), AF in 18 (20%), HF in 13 (15%) and ACS in one (1%). The Kaplan-Meier curves showed that the presence of LA thrombogenic milieu was associated with a higher risk of CV events (figure). In the multivariate analysis, only CHADS2 score (HR = 1.48, 95% CI = 1.01—2.18, P = 0.044) and presence of TEE-detected LA thrombogenic state (HR = 3.31, 95% CI = 1.14—9.59, P = 0.028) were predictors of cardiovascular events.

Conclusion.— TEE-detected LA thrombogenic milieu is associated with a higher risk of cardiovascular events, including death, stroke, HF and ACS.

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