CASE-BASED SESSION: IMAGING UNUSUAL CASES

Wednesday 3 December 2014, 14:00–15:30
Location: Agora

108 Refractory shock after coronary intervention: an unusual presentation uncovered by echocardiography
CY. Wong
Queen Elizabeth Hospital, Medicine, Hong Kong, Hong Kong SAR, People’s Republic of China

A 44-year-old lady with acute coronary syndrome underwent percutaneous coronary intervention (PCI) to left anterior descending artery (LAD) via right radial approach. The procedure was complicated by Ellis Type III perforation of mid-LAD after stenting, which was successfully sealed off by cover stents. Post-procedure echocardiogram showed small pericardial effusion (~5 mm) without tamponade.

Few hours later, the patient developed severe hypotension (70/40 mmHg) without chest pain which was not responsive to initial fluid challenge. There was no new ST changes on ECG, nor any visible active bleeding and drop in hemoglobin level. Urgent echocardiogram showed increased pericardial effusion of around 1 cm, but without any classical features of tamponade. Nevertheless, pericardiocentesis via subcostal approach was done with 150 ml blood-stained fluid drained. Yet the patient remained in severe shock despite addition of inotropes. A second careful search by echocardiogram revealed a large pericardial hematoma (4.5 cm × 2.5 cm) compressing the right ventricular outflow tract (RVOT) to a slit-like passage, which is best viewed in the parasternal short axis view (Figure A). This resulted in obstructive shock. Subsequent computerized tomography also confirmed the presence of periaortic hematoma extending to, and compressing on the RVOT (Figures B). Relook angiogram showed no new perforation, and it was presumed that there has been delayed oozing leading to this presentation. The patient was managed expectantly with volume replacement and gradually recovered.

Conclusion: Acute pericardial hematoma at RVOT location can cause cardiac tamponade in the abscene of classical echocardiographic features in usual windows. Clinical correlation with meticulous search are the key to uncover the diagnosis.

Abstract 108 Figure. RVOT Haematoma on ECHO and CT

109 Can we use 3D transesophageal echocardiography for the diagnosis of isolated right ventricular diverticulum?
R. De La Espriella-Juan1; B. Bochard-Villanueva1; J. Estornell-Erill2; JL. Perez-Bosca1; R. Paya-Serrano1; O. Fabregat-Andres1; C. Albiach-Montanana1; B. Trejo-Velasco1; S. Morell-Cabedo1; F. Ridocci-Soriano1
1University General Hospital of Valencia, Department of Cardiology, Valencia, Spain; 2University General Hospital of Valencia, Cardiac Imaging Unit ERESA, Valencia, Spain

A 16-year-old male was referred to our hospital because of exertional chest pain. He had not personal or family history of cardiovascular disease. Findings on physical examination and vital signs were unremarkable. The ECG showed right bundle super- cantiopair zonal block pattern with low potentials in frontal plane and intraventricular conduction delay (QRS 120 msg) with pseudo-epsilon wave in V1 (Panel A). Transthoracic echocardiography and treadmill test were both normal. Coronary CT angiography excluded coronary anomalies; nevertheless, an aneurysmal image localized on the right ventricle (RV) free-wall was observed leading to a differential diagnosis between ventricular diverticulum (VD) and aneurism (Panel B and C). Cardiac MRI was performed revealing a sacular structure on the RV free wall with normal contractility and the same tissue characteristics as the adjacent myocardium without fatty infiltration or late contrast enhancement (Panel D). All these findings confirmed the diagnosis of isolated right ventricular diverticulum. Real-time 3D TEE with off-line MPR reconstruction was performed with the aim of illustrating the usefulness of this highly available and relatively inexpensive technique as an alternative to other image modalities for the visualization of right ventricle anatomy and function. In our patient it revealed a 3.4 × 2.7 cm cavity localized at the base of the RV below the septal leaflet of the tricuspid valve (Panel E and F). To the best of our knowledge, this is the first description of a RVD visualized on 3D TEE. As the patient was asymptomatic, we decided an initial conservative management.

Abstract 109 Figure.
The aim of this study is to facilitate basic orientations when abnormal echoes specific signs. Histologic proof of the diagnosis of rhabdomyopathy (Panels A - F, blue arrow) had its distal end causing significant focal stenosis at the origin of the posterior descending artery (Panels D - F, yellow arrow). The drain was immediately repositioned and the patient was discharged in a few days without any further complications. Chest drains, which are routinely inserted after cardiovascular surgery, have been rarely reported to cause compression of the coronary arteries. To the best of our knowledge this is the first case describing this complication as the causative mechanism of myocardial infarction. Owing to its field of view and spatial resolution, CCTA is an ideal imaging technique for the depiction of coronary artery topographic relationships.

Abstract 111 Figure.