1709 Successful rescue of a “suicide ventricle” during transfemoral transcatheater aortic valve implantation (TF-TAVI)

M.Z. Khasawaja1, W.R. Davies2, K. Bolten3, K. Wilson4, J. Hancock5, C.P. Young6, V. Bapat7, M. Thomas7, S.R. Redwood1, King’s College London, BHF Centre of Res. Excellence, Cardiovascular Division, St Thomas’ Hospital, London, United Kingdom; 1Guy’s and St Thomas’ NHS Foundation Trust, London, United Kingdom

Introduction: Circulatory collapse during transfemoral transcatheater aortic valve implantation (TF-TAVI) procedure is a life-threatening complication. We present an important and poorly described case.

Case report description: An 82 year old male was accepted by the TAVI multidisciplinary team for TF-TAVI. He had severely impaired left ventricular (LV) function (LVEF 25%), normal LV wall thickness and severe aortic stenosis (PG 63 mmHg, AVA 0.8cm²). Coronary angiography revealed significant disease in the proximal-mid LAD, mid-CABG and an occluded RCA. His logistic EuroScore was 17.45%. It was felt that since his primary complaint was dyspnoea and he reported no anginal symptoms, in the absence of prognostic coronary disease, he did not require pre-TAVI revascularisation. The procedure was performed under a general anesthetic with peri-operative tranoesophageal echocardiography (TOE) using a 25 mm Edwards SAPIEN XT with a good final position, no AR was observed. He was however haemodynamically unstable. He suffered a rapid loss of blood pressure and ventricular tachycardia, which reverted to asystole after defibrillation. CPR was performed according to guidelines. TOE was used to exclude anuric or not infarct iatrogenic disruption of the mitral valve apparatus and prosthetic structural failure or malposition. Angiography confirmed patency of the coronary arteries and ilio-femoral integrity. A ‘suicide ventricle’ was diagnosed and the decision was made to initiate femoral-femoral cardiopulmonary bypass to stabilise the patient. This was gradually weaned over 30 minutes with successful return of intrinsic cardiac function. Initial post-procedural tranoesophageal echocardiography demonstrated improvement of LV function (LVEF 45%) with normal prosthetic flow. He was extubated and the echocardiographic improvement was maintained at 60 day follow up with marked symptomatic improvement.

Discussion and conclusion: A ‘suicide ventricle’ is important cause of peri-procedural hypotension and circulatory collapse in TAVI patients. Immediately available fluoroscopic and TOE imaging can help to exclude the other major causes. A perfusionist and a primed CPB machine in the room can allow a decision to be recovered and provide an effective bridging for return of myocardial function. The mechanism and aetiology of this difficult complication is not yet known; revascularisation of large areas of at-risk myocardium may be protective. The effects of treatment of coronary artery disease prior to TAVI will be addressed in ongoing the ACTIVATION trial (ISRCTN75869300).

1710 Transcatheater aortic valve implantation and mitral valve injury: not too low but not too high

C. Venner1, C. de Moura2, Z. Frikha3, M. Angiol1, T. Folliguet1, E. Alion1, D. Mandy3, C. Belton-Su4, O. Hutlin4, 1University hospital of Nancy, Department of Cardiology, Vandoeuvre Les Nancy, France, Nancy, France; 2University hospital of Nancy, Department of Cardiac Surgery, Vandoeuvre Les Nancy, France, Nancy, France; 3University hospital of Nancy, Department of Nuclear medicine, Vandoeuvre Les Nancy, France, Nancy, France

Introduction: Transcatheater Aortic valve implantation is a new challenging procedure for frail patient with several co-morbidities. In this case report, the patient developed a mitral valve endocarditis on a post-TAVI mitral valve injury. The level of aortic valve implantation and mitral valve interaction are discussed and may have provoked mitral lesions making the bed of endocarditis.

Case report description: An 81-year-old man with symptomatic severe aortic stenosis was referred for transcatheter aortic valve implantation. TranshepaticECHOCARDIOGRAPHIC (TTE) assessment confirmed a low-flow low-gradient aortic stenosis, with a mean gradient a moderately impaired left ventricular function and no mitral regurgitation. A 26 mm SAPIEN valve was inserted through a right trans-femoral approach. Final valve positioning was performed under rapid ventricular pacing. Post-implantation control was sub-optimal with no aortic regurgitation but the valve was found to be slightly too high relative to the aortic pressure and ventricular tachycardia, which reverted to asystole after defibrillation. CPR was performed according to guidelines. TOE was used to exclude anuric or not infarct iatrogenic disruption of the mitral valve apparatus and prosthetic structural failure or malposition. Angiography confirmed patency of the coronary arteries and ilio-femoral integrity. A ‘suicide ventricle’ was diagnosed and the decision was made to initiate femoral-femoral cardiopulmonary bypass to stabilise the patient. This was gradually weaned over 30 minutes with successful return of intrinsic cardiac function. Initial post-procedural tranoesophageal echocardiography demonstrated improvement of LV function (LVEF 45%) with normal prosthetic flow. He was extubated and the echocardiographic improvement was maintained at 60 day follow up with marked symptomatic improvement.

Discussion and conclusion: A ‘suicide ventricle’ is important cause of peri-procedural hypotension and circulatory collapse in TAVI patients. Immediately available fluoroscopic and TOE imaging can help to exclude the other major causes. A perfusionist and a primed CPB machine in the room can allow a decision to be recovered and provide an effective bridging for return of myocardial function. The mechanism and aetiology of this difficult complication is not yet known; revascularisation of large areas of at-risk myocardium may be protective. The effects of treatment of coronary artery disease prior to TAVI will be addressed in ongoing the ACTIVATION trial (ISRCTN75869300).

1710 Transcatheater aortic valve implantation and mitral valve injury: not too low but not too high

C. Venner1, C. de Moura2, Z. Frikha3, M. Angiol1, T. Folliguet1, E. Alion1, D. Mandy3, C. Belton-Su4, O. Hutlin4, 1University hospital of Nancy, Department of Cardiology, Vandoeuvre Les Nancy, France, Nancy, France; 2University hospital of Nancy, Department of Cardiac Surgery, Vandoeuvre Les Nancy, France, Nancy, France; 3University hospital of Nancy, Department of Nuclear medicine, Vandoeuvre Les Nancy, France, Nancy, France

Introduction: Transcatheater Aortic valve implantation is a new challenging procedure for frail patient with several co-morbidities. In this case report, the patient developed a mitral valve endocarditis on a post-TAVI mitral valve injury. The level of aortic valve implantation and mitral valve interaction are discussed and may have provoked mitral lesions making the bed of endocarditis.

Case report description: An 81-year-old man with symptomatic severe aortic stenosis was referred for transcatheter aortic valve implantation. TranshepaticECHOCARDIOGRAPHIC (TTE) assessment confirmed a low-flow low-gradient aortic stenosis, with a mean gradient a moderately impaired left ventricular function and no mitral regurgitation. A 26 mm SAPIEN valve was inserted through a right trans-femoral approach. Final valve positioning was performed under rapid ventricular pacing. Post-implantation control was sub-optimal with no aortic regurgitation but the valve was found to be slightly too high relative to the aortic pressure and ventricular tachycardia, which reverted to asystole after defibrillation. CPR was performed according to guidelines. TOE was used to exclude anuric or not infarct iatrogenic disruption of the mitral valve apparatus and prosthetic structural failure or malposition. Angiography confirmed patency of the coronary arteries and ilio-femoral integrity. A ‘suicide ventricle’ was diagnosed and the decision was made to initiate femoral-femoral cardiopulmonary bypass to stabilise the patient. This was gradually weaned over 30 minutes with successful return of intrinsic cardiac function. Initial post-procedural tranoesophageal echocardiography demonstrated improvement of LV function (LVEF 45%) with normal prosthetic flow. He was extubated and the echocardiographic improvement was maintained at 60 day follow up with marked symptomatic improvement.

Discussion and conclusion: A ‘suicide ventricle’ is important cause of peri-procedural hypotension and circulatory collapse in TAVI patients. Immediately available fluoroscopic and TOE imaging can help to exclude the other major causes. A perfusionist and a primed CPB machine in the room can allow a decision to be recovered and provide an effective bridging for return of myocardial function. The mechanism and aetiology of this difficult complication is not yet known; revascularisation of large areas of at-risk myocardium may be protective. The effects of treatment of coronary artery disease prior to TAVI will be addressed in ongoing the ACTIVATION trial (ISRCTN75869300).

1893 Kawasaki disease and coronary aneurysms: is the anticoagulant therapy adapt to prevent thrombosis?

A. Cirque, P. Szwarz, M.C. Gatto, M.G. Vassallo, F. Adamo, N. Bruno, A. Mancone, P. Severino, M. Mancone, F. Fedele. Sapienza University of Rome, Department of Cardiovascular, Respiratory and Morphologic Sciences, Rome, Italy

Introduction: Kawasaki disease (KD) is a childhood vasculitis characterized by fever, bilateral conjunctivitis, erythema of the oral mucosa, rash in the extremities and cervical lymphadenopathy. In the patients who develop coronary aneurysms, long-term antiplatelet therapy is recommended.

Case report description: A 26 years-old men was admitted to our Department for oppressive chest pain, onset at rest, radiating to the neck and disappears (within 40 minutes) after taking nitroglycerine. The diagnosis of KD was made about 15 years ago with the evidence of coronary artery involvement. His anti-coagulation included warfarin once daily (INR 2-3). EKG showed ST elevation in anterior leads. Echocardiogram was normal. The coronary angiography demonstrated a severe luminal irregularities with aneurysms (Fig. 1A, B, white arrows). Right