Dislodgement of coronary stent-balloon catheter before deployment during percutaneous coronary angioplasty

Sandeep Kumar Kar, Dipanwita Das and Chaitali Sen Dasgupta
IPGME & SSKM Hospital, India

Background: Dislodgement of coronary stent-balloon catheter before deployment during percutaneous coronary intervention, though rare but is a life threatening complication. A 47-year-old male presented with unstable angina for five years. Angiography revealed that there was a stenosis (90%) in the LAD and significant plaque in the circumflex artery. During PTCA a stent-balloon was dislodged in LMCA (Left Main Coronary Artery). Under cardiopulmonary bypass, with cardioplegic arrest, the stent-balloon-catheter was extracted through coronary arteriotomy with repair of ruptured LIMA (Left Internal Mammary Artery). Coronary revascularization was done with reversed saphenous vein grafts to the LMCA and D1 coronary arteries.

Introduction: Percutaneous coronary stenting procedure for coronary artery disease is common but can sometimes result in life threatening complications. Balloon angioplasty can lead to different catastrophic complications like acute stent thrombosis, coronary perforations and dissection of coronary arteries. Severe dissection with abrupt closure can cause even death of the patient. Recently the authors have encountered a case in which coronary angioplasty balloon got stucked in the left main coronary artery (LMCA) in a completely dilated stent during angioplasty.

Case report: A 48 year old, diabetic, hypertensive, chronic smoker was presented with exertional chest pain for last 2 years. He had family history of hypertension and diabetes. His resting electrocardiogram revealed sinus rhythm and T-wave inversion in V4-V6. The transthoracic echocardiogram showed left ventricular (LV) relaxation abnormality and ejection fraction of 48%. Coronary angiography was done. It showed significant plaque in the circumflex coronary artery proximal to the origin of OM1 and significant lesion in LAD with 90% obstruction in just after origin of 1st diagonal branch. Patient was on Beta-blocker, Isosorbid dinitrate, Clopidogrel and Aspirin. Pre-procedure pulse rate was 70/min, noninvasive blood pressure 140/90mmHg, SpO2 100 in room air. After insertion of right femoral sheath, guide wire was inserted. An angioplasty balloon catheter was railroaded over it to place the stent at LAD after balloon dilatation. But accidentally following balloon dilatation, it could not be deflated and was impacted in the LMCA. Patient was complaining of severe oppressive substernal pain that was radiating to the back, followed by severe dyspnea and profuse sweating and restlessness. Patient's vitals started deteriorating and BP fell to 90/60 mmHg. ECG revealed different types of ill sustained arrhythmias and ST segment elevation in all anterior leads. Multiple attempts were taken to deflate the balloon and to remove it but failed. Fluoroscopic angiography showed the partially inflated balloon in the LMCA and there was leakage of dye from LMCA suggesting LMCA rupture.

sndpkar@yahoo.co.in