Case Summary:
We describe a case of 50 years old man with 3 vessels CAD (two stenosis on RCA, one bifurcation stenosis on LAD/D1 and another bifurcation on CX/OM1) in left dominance.

After the diagnostic catheterization we performed PTCA with DES on RCA and LAD by radial approach, and the next day we treated the CX/OM1 from femoral approach with placing a bifurcation dedicated drug-eluting self-expandable stent Axxess. After that he developed a pseudoaneurisma at the femoral site, that we treated by double approach: inflated balloon in the femoral artery and under echo guidance injection of thrombin with success.

The patient was discharged without any symptoms.

Relevant catheterization findings:
Coronary angiography showed occlusion of proximal right coronary artery (Figure 1) and severe stenosis of ostial Left Main (Figure 2).

[Interventional Management]
Procedural step:
A second degree AV block appeared with subsequent cardiac arrest due to pulseless electric activity. The patient was immediately assisted with cardiopulmonary resuscitation, orotracheal intubation and intraaortic balloon pump. Percutaneous coronary intervention with stent implantation (DRIVER 3.5x9 mm, Medtronic) was performed on left main (Figure 3) and then on the right coronary artery (XIENCE PRIME LL 3X38 mm) (Figure 4). Intravascular ultrasound (Eagle Eye, Volcano Corporation), performed after balloon angioplasty before stent implantation revealed severe post-irradiation ostial stenosis of both coronary arteries and ulcerative plaque in the proximal segment of RCA (Figure 5).

The echocardiogram showed a severe dysfunction of left ventricle because of global hypokinesia and akinesia of inferior wall. The patient was supported with adrenaline, noradrenaline and dopamine and monitored invasively.

After 24 hours the lactate trend was lowering and all parameters were stable and improving.
Case Summary:
Pericardial abnormalities are the most common manifestation of radiation-induced cardiac disease, but coronary artery lesions are not rare. This report describes a case of acute myocardial infarction evolving in cardiogenic shock in a patient previously treated with mediastinal irradiation for Hodgkin’s disease. As clinical status rapidly worsened a successful emergency PCI was performed both on Left Main and RCA.
Patient’s condition progressively improved and he was discharged with good recovery of cardiac contractility (ejection fraction 50%). Six month follow up showed good clinical status and functional class NYHA I. Previous mediastinal irradiation is a risk marker for ostial coronary stenosis. Emergency treatment with PCI shows a good result in short term follow up.

TCTAP C-049
A Case of Life-saving Treatment Through Revascularization Using Double-mini Crush Technique on Left Main Trifurcation Lesion in a Patient with Acute Coronary Syndrome Complicated by Cardiogenic Shock
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[Clinical Information]
Patient initials or identifier number:
S.H.
Relevant clinical history and physical exam:
The patient was a 71-year-old male. He was diagnosed to have unstable angina and was admitted to our hospital on February 23, 2013. The CAG revealed severe stenoses of LAD segments 6 and 8 and the Intermediate branch (IM), and a 3.0/9mm, 2.5/12mm, and 2.5/14mm Integrity stent was placed, respectively. Symptoms then improved and the patient was discharged, but with the recurrence of symptoms from May of that year, repeat angiography was performed, revealing a 99% stenosis proximal to the stent in segment 6, a 99% ostial stenosis of the IM, and 99% ostial stenosis of segment 11. This was a true trifurcation lesion with a 50% LMT stenosis in the LCA and hypoplasia of the RCA. Due to occurrence of ACS after angiography, the patient underwent emergency CABG (LITA-LAD, SVG-IM, SVG-OM) on May 11. Following this, the patient made good progress and was discharged, but after going to bed on July 6, he felt oppressive chest and back pain with cold sweat, and presented to our emergency department. He was immediately admitted for ACS and acute pulmonary edema. An endotracheal intubation was performed and under mechanical ventilation, an IABP was inserted, and an emergency CAG was performed.

Relevant catheterization findings:
The bypass vessels, LITA-LAD and SVG-IM, were both occluded, and although SVG-OM was patent, it was anastomosed to the 2nd OM with a small perfusion area. All 3 branches of the LMT showed a 99% stenosis with delay.

[Interventional Management]
Procedural step:
The LAD and IM were first dilated by a balloon. Following this, each showed an improvement to TIMI 3 flow, and while there was residual stenosis, the procedure was ended for the time being. Although the hemodynamics showed an improvement tendency, it was thought that stent placement in the LMT trifurcation would be necessary as a life-saving procedure, and repeat PCI was conducted on July 8. Taking a right transradial approach, a 6Fr GC (Mach1 VL3.0) was used to pass wires into the three branches and Promus Element stents were deployed with a 2.25/12mm placed in the ostium of segment 11 and a 2.5/28mm in the IM ostium using the modified mini-crush technique. A 3.0/38mm Promus Element was similarly implanted in the LMT-LAD. Heart failure improved dramatically after the procedure, and with good progress, the patient was discharged.