CASES

ACUTE CORONARY SYNDROME: STEMI, NSTEMI, ACS
(TCTAP C-001 TO TCTAP C-031, TCTAP C-227)

TCTAP C-001
Acute Coronary Syndrome (ACS) with Three Vessel Occlusion
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[CLINICAL INFORMATION]
Patient initials or identifier number. T.F.
Relevant clinical history and physical exam. A 43-year-old male who had already been diagnosed with diabetes mellitus and dyslipidemia, was referred to our hospital because of chest oppression and electrocardiogram (ECG) abnormalities.
On arrival findings, his blood pressure was 112/69 mmHg, his heart rate was 91 bpm. There were coarse crackles in both sides of lung field. S3 was heard.
Relevant test results prior to catheterization. ECG showed QS pattern and ST elevation in V1-3 leads, abnormal Q wave and ST elevation in II/ III/ aVF leads.
Ultrasound echocardiography (UCG) showed the ejection fraction was approximately 20%, and there was left ventricular thrombus. These findings indicated ACS due to multi-vessel coronary disease.
Relevant catheterization findings. Coronary angiography (CAG) showed total occlusion of proximal left anterior descending coronary artery (LAD), proximal right coronary artery (RCA), and proximal left circumflex artery (LCX). There was only collateral circulation from diagonal branch.

[INTERVENTIONAL MANAGEMENT]
Procedural step. At first, we performed percutaneous coronary intervention (PCI) to RCA with intra aortic balloon pumping (IABP) support. We implanted three stents in RCA lesion. Next day, we performed PCI to LAD with the kissing balloon technique (KBT) and implanted one stent. After the weaning off IABP and improving heart failure, he underwent myocardial perfusion scintigraphy, and this revealed ischemia at LCX lesion. We performed successful PCI to LCX and implanted two stents. Then, there was no in-stent restenosis (ISR) when he underwent coronary angiography (CAG) after 6 months of their operations.

Case Summary. We experienced a case of ACS involving extremely severe ischemic heart disease. In patients with three vessel occlusion, aggressive coronary intervention could rescue and help the patient to return to work.

TCTAP C-002
Primary Percutaneous Coronary Intervention in Acute Anterior Wall Myocardial Infarction with Cardiogenic Shock Due to Left Main Coronary Artery Thrombus
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[CLINICAL INFORMATION]
Patient initials or identifier number. AK
Relevant clinical history and physical exam. Clinical History: 31 Years, Male, Non DM, Non HTN, Smoker
Chief Complaints: Retrosternal chest Pain, Pain radiating to Precordium associated with sweating and shortness of Breath
Clinical Examination:
Pulse 100 / min, BP 70/50 mmHg,

Relevant test results prior to catheterization. Respiratory rate 22/min, RS Bilateral rales upto 25% of Lung fields
2D Echo: Akinetic LAD territory, Severe LV systolic dysfunction, LVEF 30%, Grade III diastolic dysfunction, No mechanical complications
Relevant catheterization findings. Intra Aortic Balloon Pump inserted, I.V Heparin 5000 I.U, IV Tirofiban 30mcg/Kg bolus and 0.15 mcg /kg/
CAG: Distal LMCA thrombus, LAD total occlusion, Thrombus extending into Ostia of LCX and Ramus.

**INTERVENTIONAL MANAGEMENT**

Procedural step. In lieu of LMCA thrombus IABP inserted through groin. Guide 7F XB3, G/W Rinato x3 in LAD, LCX & Ramus. In LAD multiple runs of Thrombus Aspiration were done & a combination of Red-White thrombus aspirated. After multiple runs there was TIMI-II flow in LAD & marginal improvement in haemodynamics. Still there was persistent large thrombus burden (LTB), hence multiple runs of Export catheter were done in LCX & Ramus. There was reduction in thrombus but still there was persistent LTB. By this time we realized that we were dealing with more of thrombus than atherostenotic lesion. Since it was LMCA trifurcation lesion, angulated LMCA-LAD junction, cross over stenting from LMCA-LAD which is a preferred strategy was not suitable. More so in the presence of persistent LTB, there was risk of No reflow & jeopardizing the flow in LCX & Ramus which could have been catastrophic. We were exhausted of all options & patient continued to have chest pain & also Mechanical thrombo-aspiration device was not available. Hence we decided to use 20Mg I/C Tenecteplase.

Check Angio after 10 min has showed near total dissolution of thrombus with TIMI III flow in LAD, LCX & ramus. There was mild residual lesion at distal LMCA, LAD junction IABP weaned off after 48 Hrs; Patient didn’t develop any TIMI major or minor bleed & was discharged after 5 days

Check Angio at 6 weeks showed mild lesion at Ostial LAD; Echo: Mild Apical Hypokinesia & LVF improved to near normal.

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Case Summary.
In complex scenarios like this, Management of thrombus burden is crucial. Thrombus containing lesion is associated with increased mortality, no reflow, distal embolization and migration of Thrombus into non-infarct related arteries. TIMI III flow in infarct related arteries should be the goal for successful outcomes. Mechanical interventions along with Intracoronary thrombolysis is a promising approach in young patients, with persistent large thrombus burden.

TCTAP C-003
5-in-6 Double Catheter Aspiration Technique in High Load of Thrombus AMI Case
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[CLINICAL INFORMATION]
Patient initial or identifier number. LDH
Relevant clinical history and physical exam. Male, 50yrs
Risk factors:
- DM for more than 20y, heavy smoker for more than 10y, at least 10 per day
- Hypertension for more than 20y without standard therapy
- Persistent chest pain for 2h and was sent out to our patient department directly.
CKMB: 98 U/L
TNI: 0.612 ng/mL (0.0-0.02)
Relevant test results prior to catheterization. ECG elevated UCG shows that the inferior wall movement was abnormal.
CKMB: 98 U/L
TNI: 0.612 ng/mL (0.0-0.02)
Relevant catheterization findings. Prox-LAD total occlusion; LCX, RCA normal.

[INTERVENTIONAL MANAGEMENT]
Procedural step. As the thrombus burden is large, first we try to use normal manual blood thrombus aspiration but the result turns out to be not that satisfied after many attempt.
So we try to us a 5-in-6 guiding catheter skill to try to remove the large blood thrombus and the result was quite acceptable after OCT scan 5F STO1 catheter in 6F BL3.0 catheter under the support and guidance of run through GW.
Then, the pathology result of the thrombus show that the normal manual aspiration got RED thrombus, and the 5-in-6 catheter got WHITE thrombus.