Case Summary:
We shall have to remain cautious in treating every CAD equally as simple and complex because none can predict when a simple procedure becomes complex.

TCTAP C-019
Multiple Culprit Vessels in Acute Myocardial Infarction
Kalaichelvan Udhayakumaran
Madras Medical Mission, India

[Clinical Information]
Patient initials or identifier number:
Mr. KM
Relevant clinical history and physical exam:
47 years male, euglycemic, normotensive, admitted with complaints of chest pain since 1 hour, associated with sweating and giddiness.
O/E:
Pulse: 76/min
BP: 90/60 mHg
SpO2: 98%
CVS: S1, S2 (+)
other systems: NAD
Relevant test results prior to catheterization:
ECG: NSR, ST Elevation in lead II, III and aVF
ECHO: Regional wall motion abnormality present in infero posterior segments. Mild LV dysfunction. No MR
Relevant catheterization findings:
LCA was engaged and lesion in the mid LCV was crossed. Predilatations were done using a 2 x 12 mm trek upto 10 atm for 6 sec. Stent deployment was done using a 2.5 x 28 mm xience v at 14 atm for 8 sec.
Final angiogram showed no residual stenosis with good antegrade flow.
Patient symptomatically improved and st segment started settling in the inferior leads.
The procedure was uneventful patient shifted with stable hemodynamics.

Procedural step:
Procedure done under local anaesthesia through right femoral approach
Injection clotide started with 10 (6 + 4) ml bolus followed by 11 ml/ hr infusion
RCA was engaged and totally occluded distal segment was crossed.
Direct stent deployment was done from distal rca to PLV using a 25 x 38 mm xience prime at 10 atm for 6 sec.
Patient continued to have chest pain with hypotension. There was persistent st elevation in the inferior leads and sinus tachycardia. Hence it was decided to perform LCX PCI.
Case Summary:
LCA was engaged and lesion in the mid LCX was crossed. Predilatations were done using a 2 x 12 mm trek upto 10 atm for 6 sec. Stent deployment was done using a 2.5 x 28 mm xience v at 14 atm for 8 sec.
Final angiogram showed no residual stenosis with good antegrade flow.
Patient symptomatically improved and st segment started settling in the inferior leads.
The procedure was uneventful patient shifted with stable hemodynamics.

TCTAP C-020
An Unusual Case of STEMI in a Woman
Aaron Wong
National Heart Centre Singapore, Singapore

[Clinical Information]
Patient initials or identifier number:
CGC
Relevant clinical history and physical exam:
A 64 year-old Chinese woman with no cardiovascular risk factors, presented with 9 months history of breathless on exertion. She was treated as for heart failure by family physician and her symptoms improved with oral frusemide.
Physical examination was essentially normal with no signs of congestive heart failure.
Relevant test results prior to catheterization:
ECG showed poor R wave progression and LVH by voltage criteria with non specific ST-T changes. (Figure 1, bottom panel)
Echocardiography at our centre showed severely impaired LVEF of 25% with regional wall abnormality in the LAD territory and she was advised for coronary angiography to rule out coronary artery disease.
Relevant catheterization findings:
Coronary angiography showed near normal coronary artery with only very mild luminal irregularities. (Figure 1, top panel)
Non ischemic cardiomyopathy was diagnosed. However, 6 hours after the procedure, she complained of severe central chest pain and diaphoresis in the ward. Her symptoms were not relieved with S/L GTN.
Repeat ECG showed ST elevation in anterior leads. (Figure 2, top panel)
[Interventional Management]
Procedural step:
Immediate coronary angiography was performed with a view for primary PCI, which showed complete occlusion of mid LAD at a site which was near normal 6 hours before. (Figure 2, top panel)
The occlusion was not relieved with intracoronary GTN.
Aspiration thrombectomy was performed and large amount of thrombus was aspirated. TIMI 3 flow was established in the LAD but there was still a significant residual lesion present in the mid LAD.
After given repeated bolus intracoronary GTN, the residual lesion eventually resolved with no significant lesion angiographically. (Figure 3, top and middle panel) IVUS was performed and confirmed that there was no significant lesion or abnormality at the site of occlusion in the mid LAD. (Figure 3, bottom panel)
6 months after the coronary angiography, the LVEF was 55% with some mild regional wall abnormalities.
16 months later the echocardiography was completely normal.
There may be a possibility that there is an association between coronary spasm and cardiomyopathy.
Case Summary:
Coronary artery spasm is common and usually not clinically significant. However, intense spasm can transiently cause complete occlusion of the artery resulting in chest pain at test and ST elevation on ECG but can be easily treated with s/1 GTN.
In our patient, sudden occlusion of a normal coronary artery 6 hours after a coronary angiography suggested vasospasm as the etiology.

The unusual thing was that the spasm in the mid LAD was persistent and lead to thrombus formation in the coronary artery. After successful treatment with aspiration thrombectomy and IC GTN, IVUS examination did not showed significant disease. This case illustrated coronary spasm as a possible cause of STEMI, albeit rare, and possible association with her “non-ischemic” cardiomyopathy in this case.

TCTAP C-021
A Case of Acute Apical Anterior Myocardial Infarction Due to Coronary Spontaneous Dissection, Successfully Treated with Intravascular Ultrasound Guided Wiring
Satoshi Yamamoto
Chikamori Hospital, Japan

[Clinical Information]
Patient initials or identifier number: HK

Relevant clinical history and physical exam:
The case was 50 years old female who had a history of Non-ST elevation inferior myocardial infarction due to coronary spasm in 2007. She visited to our hospital because of chest oppression for 1 hour. The blood pressure was 140/90 mmHg, and the heart rate was 74 beats/minutes. No cardiac murmur and no lung rale could be heard.

Relevant test results prior to catheterization:
The 12 leads electrocardiogram showed peaked T wave in lead V3-6. The chest roentgenogram showed no evidence of congestive heart failure. No cardiac enzyme including cardiac troponin was elevated in the laboratory tests. The transthoracic echocardiography showed antero-apical asynergy.

Relevant catheterization findings:
The coronary angiography showed total occlusion in distal left anterior descending artery #8

[Interventional Management]
Procedural step::
Guiding catheter: 6Fr Axess JL3.5ST
Crossed the guide wire (Runthrough extra floppy) with Finecross GT support.
Dilated the lesion with balloon (TAZUNA 1.5*15mm) 5 times.
Took the intravascular ultrasound (IVUS) (Navifocus) image.
Recross another wire (Sion Blue) in the true lumen with Crusade support.
Dilated the lesion with balloon (TAZUNA 1.5*15mm) 5 times.
Dilated with larger balloon (KUNAI 2.25*13)
Finished the procedure with TIMI III flow.