**Case Summary:**
A 74 years old male presented to our hospital because of anterior chest pain. Physical examination was normal.Electrocardiogram showed ST depression in leads V2-4 and Q wave in lead III. Creatine kinase and cardiac troponin I elevated as 298 IU/L (CK-MB 48 IU/mL) and 4.47ng/mL. Coronary artery angiography showed stenotic lesion with spontaneous coronary artery dissection (SCAD) in the left circumflex artery and thrombotic lesion in the distal site. We performed OCT before and after direct stent implantation, we succeeded in observation of the unique image about SCAD.

**TCTAP C-008**
Multimodality Imaging of Multivessel Coronary Artery Spasm Presenting as Sudden Cardiogenic Shock

**Jee Eun Kwon, Sang-Wook Kim**
Chung-Ang University Hospital, Korea (Republic of)

**[Clinical Information]**
**Patient initials or identifier number:**
KDH(00630559)

**Relevant clinical history and physical exam:**
A 73 years old male visited emergency department due to decreased mentality. He was diagnosed as stable angina nine years ago and had coronary stent insertion in left descending artery (LAD). He had taken angina medication since then with flurazepam due to insomnia. At the time he arrived in ER, he was unconscious but the vital status was stable. Ten minutes after arrival, his heart rate suddenly dropped to 30 beats/min with undetectable systolic blood pressure.

**Relevant test results prior to catheterization:**
Initial electrocardiogram showed non-specific ST-T change.
After 10 minutes, follow up electrocardiogram showed 5 mm ST-segment elevation in lead II, III and aVF.

**[Interventional Management]**

**Procedural step:**
Coronary angiogram revealed a severe spasm of the epicardial arteries, resulting in diffuse subtotal occlusion of the right coronary artery (RCA) and left circumflex artery (LCX), and diffuse narrowing of the LAD with intact previously inserted stent(Taxus, 3.0 x 18mm).

Intracoronary administration of nitroglycerin led to complete resolution of spasm as well as ST-segment elevation.

Intravascular ultrasound (IVUS) imaging of proximal portion of RCA was done but neither plaque rupture nor erosion were found. Instead, optical coherence tomography (OCT) image of proximal portion of RCA showed multiple microthrombi with plaque erosion.

**Case Summary:**
A 73 years old male visited emergency department due to decreased mentality. He was diagnosed as stable angina 9 years ago and had coronary stent insertion in left descending artery (LAD). At the time he arrived in ER, he was unconscious but the vital status was stable and electrocardiogram showed non-specific ST-T change. In 10 minutes after arrival, his heart rate suddenly dropped to 30 beats/min with undetectable systolic blood pressure. Follow up electrocardiogram showed 5 mm ST-segment elevation in lead II, III and aVF. Coronary angiogram revealed a severe spasm of the epicardial arteries, resulting in diffuse subtotal occlusion of the right coronary artery (RCA) and left circumflex artery (LCX), and diffuse narrowing of the LAD with intact previously inserted stent. Intracoronary administration of nitroglycerin led to complete resolution of spasm as well as ST-segment elevation. Intravascular ultrasound (IVUS) imaging of proximal portion of RCA was done but neither plaque rupture nor erosion was found. Instead, optical coherence tomography (OCT) image of proximal portion of RCA showed multiple microthrombi with plaque erosion. The patient remained stable throughout his hospital stay and was discharged.
Multivessel coronary spasm can cause life-threatening cardiac events and identifying possible mechanism of vasospasm underlying various manifestations of coronary artery disease should be highlighted.

**TCTAP C-009**

Too Much Water Will Cost a Patient’s Life After AMI

Chen Liu, Hongbing Yan
Fuwai Hospital CAMS&PUMC, China

[Clinical Information]
Patient initials or identifier number: WCD
Relevant clinical history and physical exam:
Male 72 y/o
Chest discomfort for 1 day
Risk Factors: Hypertension, hyperlipidemia, smoking.
Relevant test results prior to catheterization:
ECG Show: II III avF ST elevated with dynamic change
UCG Show: LV: 57mm, EF: 55%, segmental wall motion abnormalities in inferior wall and posterior wall
cTnI: Elevated
Relevant catheterization findings:
Three-vessel disease and the culprit artery was RCA.

[Interventional Management]
Procedural step:
1. Perform RCA angiography;
2. Perform LCA angiography;
3. Perform RCA-PCI with Guiding (6F JR 3.5) and Guide wire (Runthrough).
4. Implant Stent (Partner 4.0*29mm and 3.5*36mm)
5. Post-dilation: Voyage NC 4.0*15mm

Case Summary:
Too much water will cost a patient’s life after AMI.

**TCTAP C-010**

A Case of Acute Coronary Syndrome with Critical Mid LAD and D1 Bifurcation Lesion Successfully Treated by Mini-crush Technique

Hou Tee Lu
Sultanah Aminah Hospital, Malaysia

[Clinical Information]
Patient initials or identifier number: TYC
Relevant clinical history and physical exam:
A 74 years old man was admitted with recurrent chest pain for 2 weeks.
Coronary Risk Factors: hypertension and cigarette smoking.
He was hemodynamically stable (heart rate: 80/min, BP 140/90 mmHg) at presentation.
Relevant test results prior to catheterization:
His baseline ECG showed ‘reversible’ ST elevation at anterior precordial leads.
Troponin T level was mildly elevated.
Relevant catheterization findings:
1. Left coronary angiogram showed critical stenosis at mid left anterior descending (LAD) artery and severe stenosis at ostial diagonal (D1) artery with Medina Classification (1,1,1).
2. Left main and left circumflex arteries were normal.
3. Right coronary artery was normal.

[Interventional Management]
Procedural step:
A 7F sheath was inserted through right femoral artery. The left coronary ostium was engaged with a 7F XB catheter with 3.0cm curve. Two 0.014inch BMW and Run-through floppy guidewires were inserted into the LAD and D1 respectively.
Two Sprinter Legend (1.25x10 mm, 2.25x10 mm) balloons were used to predilate D1 (side branch) and LAD (main branch) sequentially.
After balloon dilation of both LAD and D1, the first stent (XEINCE V 3.0x15 mm) was advanced into D1 while another balloon (Sprinter Legend 2.25x10 mm) was positioned into LAD simultaneously. The D1 stent was inflated first. Then the balloon in LAD was inflated after removal of D1 stent balloon.
First kissing balloon angioplasty was performed after successful rewiring and reballooning of the D1 using Sprinter 2.25x10 mm balloon with NC Sprinter 2.75x12 mm balloon at LAD.
D1 balloon was then removed. Subsequently, the second stent (XEINCE V 3.5x18 mm) in the LAD was inflated to further crush the D1 stent.
Second kissing angioplasty (final) was repeated after sequential ballooning of the D1 using NC Sprinter 3.0x12mm and of the LAD using NC Sprinter 3.5x12mm balloon at nominal pressure. Final result was good with TIMI 3 flow.
Symptom of chest pain was completely resolved after PCI. Patient remained asymptomatic during the latest follow-up (one and half year later) at outpatient clinic.