A Case of STEMI with Total Occlusion of middle LAD and Subocclusive LMCA Thrombus

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A 53-year-old male with a history of diabetes and dyslipidemia presented to our emergency department due to sudden onset chest pain lasting for 2 hours.

- Coronary risk factor: DM  DLP  Smoking
- Family history : none

- Vital signs:  BP 123/70mmHg  HR 80 beats/min  SPO₂ 99%(room air)
### ECG

- **I**
- **II**
- **III**
- **aVR**
- **aVL**
- **aVF**

### Labo Data

<p>| | | | | | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>HbA1c</td>
<td>6.0</td>
<td>%</td>
<td>AST</td>
<td>25</td>
<td>IU/l</td>
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<tr>
<td>WBC</td>
<td>13400</td>
<td>/μl</td>
<td>ALT</td>
<td>12</td>
<td>IU/l</td>
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<tr>
<td>RBC</td>
<td>434 $\times 10^4$</td>
<td>/μl</td>
<td>LDH</td>
<td>269</td>
<td>IU/l</td>
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<tr>
<td>Hb</td>
<td>14.9</td>
<td>g/dl</td>
<td>CPK</td>
<td>154</td>
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<tr>
<td>PLT</td>
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<td>BUN</td>
<td>12.4</td>
<td>mg/dl</td>
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<tr>
<td>D-dimer</td>
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<td>Cr</td>
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<td>TP</td>
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<td>T-Chol</td>
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<td>g/dl</td>
<td>BNP</td>
<td>7.8</td>
<td>pg/ml</td>
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CAG
PCI ①

- An intra-aortic balloon pumping (IABP) was inserted and PCI performed via femoral artery.
- Guiding catheter: 7Fr AXESS™ JL4.0
- Guide wire: Runthrough NS™
- Thrombus aspiration catheter: 7Fr Eliminate™
PCI(2)

Pre thrombus aspiration

A

Vision™ 3.0 × 15mm

B  C  D
Thrombus in the LMCA was successfully aspirated!!
The maximum creatinephospho kinase (CPK) was 7716IU/l.

Left ventricular ejection fraction (LVEF) was moderately decreased.

We checked the cause of coronary thrombosis, but laboratory exams including protein C, protein S, and antiphospholipid antibody were negative.

The patient was discharged without any complications under triple anti-platelet therapy (aspirin 100mg, clopidogrel 75mg and cilostazole 200mg daily).
Follow-up CAG
(Three months later)
Discussion

- Multiple coronary thrombosis is found in more than 10% of autopsied cases.

- It seems likely that the multiple coronary thrombosis has often a rapid and fatal course, that’s why it is rarely recognized clinically.

- In this case, we thought that sudden occlusion caused by plaque rupture of the middle LAD resulted in stagnation of blood flow, and then subocclusive thrombus generated in the LMCA.
Summary

- Stagnation of coronary blood flow may be the cause of thrombus generation apart from culprit lesion.

- In this case, we performed IVUS and determined the culprit lesion. Then deployed a stent only at the culprit lesion.

- IABP and repeat thrombus aspiration was effective to treat the subocclusive thrombus in the LMCA.