

中文題目：嚴重冠心病合併左主幹病變的複雜介入治療

英文題目：Complex intervention for coronary artery disease (triple-vessel disease with left main involvement)

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### **Abstract:**

A 73-year-old female presented to the ER with chest tightness on Nov 12, 2013. Tracing back her history, she had hypertension, diabetes, hyperlipidemia, old myocardial infarction and an old stroke.

This time, 12-lead EKG revealed significant ST depression in lead I, II, aVF, V2-V6 and ST segment elevation in lead aVR compared with the baseline tracing. Typical elevation of cardiac enzymes was shown and non ST-segment elevation myocardial infarction (NSTEMI) was diagnosed.

Coronary angiography was performed and it revealed triple-vessel disease with left main trunk (LMT) involvement. After consultation with the heart team, complex percutaneous coronary intervention (PCI) will be arranged. Stage PCI for right coronary artery (RCA) was performed first but an un-dilatable lesion was located in the middle RCA even with the use of cutting balloon and non-compliant balloon under the assistance of a Guideliner catheter. Then Rotablation was performed and then 2 drug-eluting stents (DES) was successfully deployed in the RCA.

Intravascular ultrasound (IVUS) was also checked and complete stent apposition was shown.

Further PCI for the left coronary artery (LCA) was arranged later. However, it was difficult to advance any wire into the distal left circumflex artery (LCX) initially. Therefore, we performed sequential ballooning for the left anterior descending artery (LAD) first. Then, under the support of a Crusade microcatheter in the LMT-LAD position, we successfully punctured the middle LCX with a stiff wire, advanced it into the distal LCX and performed sequential ballooning. Under the support of a Guideline catheter, we successfully implanted a DES.

To treat the LMT-bifurcation, 2 DES were deployed. After sequential post-dilatation and performing the kiss balloon technique in the LMT-bifurcation, good coronary flow was shown and no further chest tightness was mentioned. We also checked IVUS and complete stent apposition was confirmed. This patient received regular follow-up till now without any discomforts.

### **Conclusions:**

1. Heart Team evaluation is important to provide all possible individualized revascularization
2. Complex PCI is feasible and pre-procedural strategies should be carefully planned.

3. IVUS guided LMT-Bifurcation stenting provides better procedural success and long term outcome.
4. Safety is of the highest priority during Complex PCI.