1145 **CHIP case of 2-vessels CTO and LMT lesion with severe calcification in a poly-vascular disease patient with cardiogenic shock**

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An 83-year-old female was admitted our hospital due to acute onset chest pain and dyspnea.
Chest X-ray showed bi-lateral lung congestion and pleural effusion.
UCG revealed low ejection fraction of LV wall (25%) and laboratory data found high level of Troponin T and BNP.
ECG findings showed worsening of ischemic heart disease and suggested old myocardial infarction of LAD territory.
Above those results, we diagnosed her acute decompensated heart failure (ADHF) and ischemic heart disease. However, after admission in our institute, her clinical course could not be improved even if optimal medical therapy was done.

Therefore, we thought that it was necessary for examine the coronary artery, so we performed emergent coronary angiogram (CAG). CAG showed 3-vessel disease with 2 vessel CTO (LMT 90%<, LAD seg6 99%, LCx seg11 CTO, RCA seg2 CTO) and severe calcification of all the lesions.
We considered CABG but carotid artery ultrasound revealed severe stenosis with bi-lateral carotid artery, and she fell into cardiogenic shock at that night of performing CAG.
Furthermore, her clinical state was ADHF, and her clinical frailty scale was moderate.
For above reasons, we had no choice but to revascularized by PCI.

At first, we inserted Impella CP, and approached for LMT to LAD lesion.
IVUS showed severe calcification and calcified nodule at LMT to LAD, so we performed rotablator with 1.75mm burr and 2.00mm burr. Fortunately, her hemodynamics was stable during rotablator.
Finally, we implanted the DES, and succeed the revascularization for LMT to LAD.
In this case, it was unclear whether there was viability of LAD territory, and also there was remained large ischemic area due to 2 vessel CTO, so we negotiated RCA CTO simultaneously.
However, J CTO score of RCA was 4, so procedural difficulty was high.
Therefore, at first, we tried to PCI for RCA CTO by retrograde approach using epicardial channel. During CTO procedure, both wire of antegrade and retrograde were out of vessel due to severe calcification in the lesion, but we could finally overcome that severe situation owing to several techniques.
As a results, we succeed revascularization for both LMT to LAD and RCA territory in this procedure.
After revascularization, her clinical course was favorable, and ejection fraction of LV wall was dramatically improved.
Finally, she could discharge our institute with independent gait.
And 2 months later after discharge, we also treated carotid artery stenosis by implanting the stent. (CAS)

In a patient with ACS, there are some problems that complete revascularization or not, which debulking device we should select, and insert MCS or not.
They are often discussed, especially in cases of CHIP such as this case.
Based on previous reports, we would like to report this case.