

53. A Case of Decompensated Congestive Heart Failure Associated With Critical Left Main Bifurcation and Severe Degenerative Aortic Stenosis

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Body

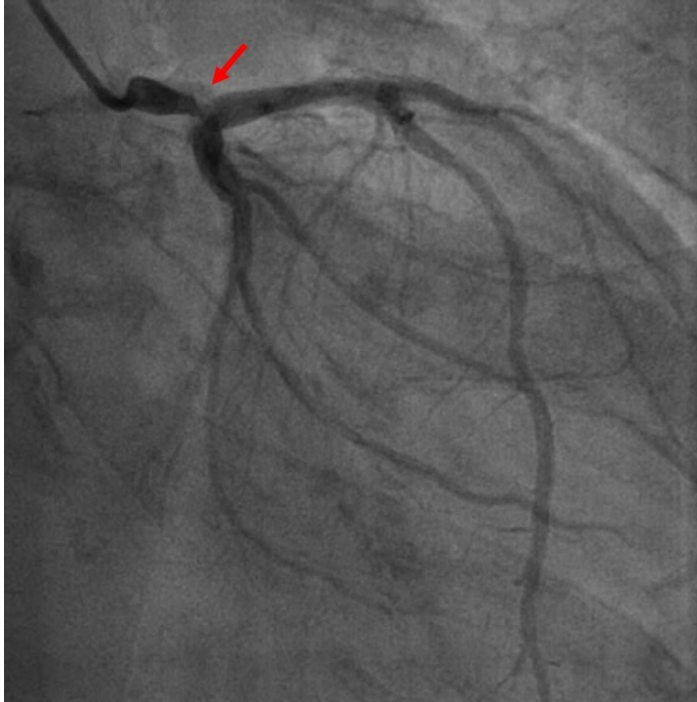
Background: The standard treatment option for patients with left main (LM) coronary artery disease and severe aortic stenosis (AS) is surgical aortic valve replacement and coronary artery bypass grafting. However, in this case, the patient has survived after percutaneous coronary intervention and consecutive transcatheter aortic valve replacement in the critical ill scenario.

Case: An 83-year-old male patient was hospitalized with exertional dyspnea and chest pain that started 7-8 days ago. Electrocardiogram showed ST elevation on V2-V4 leads at the time of visit, and blood tests showed elevated CK-MB, troponin T, creatinine, liver profile and NT-pro BNP. Echocardiogram showed severe Left ventricle (LV) systolic dysfunction (ejection fraction: 31% by biplane) with regional wall motion abnormality of Left anterior descending artery (LAD) and Left circumflex artery (LCX) territories and severe calcific degenerative AS.

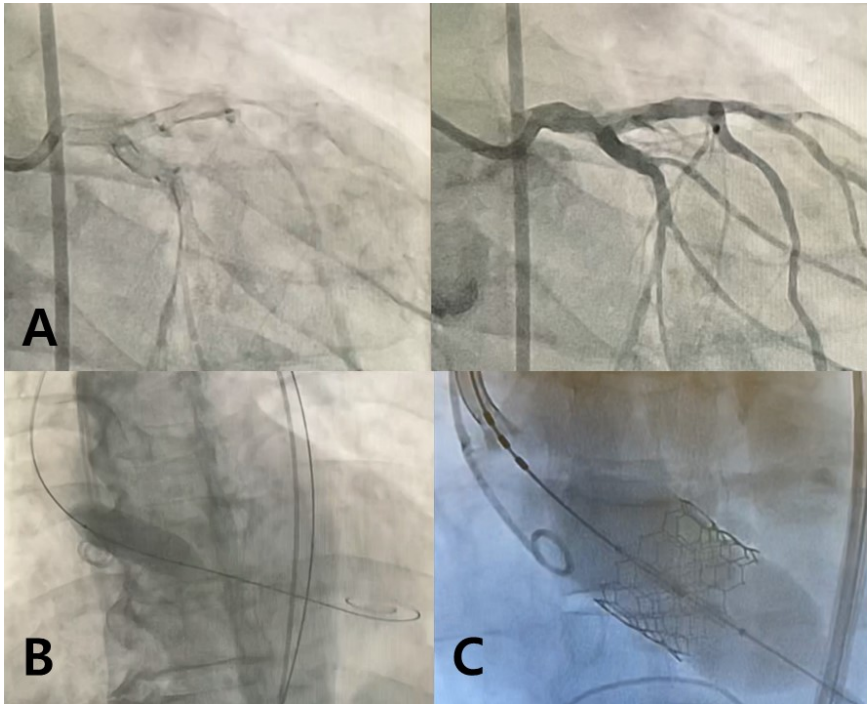
Coronary angiography was performed due to suspected subacute myocardial infarction, and as a result, critical stenosis of LM to ostial LAD and ostial LCX was observed [Figure 1].

In order to consider surgical treatment with critical LM bifurcation stenosis and severe AS, intervention was not performed, and medical treatment was first performed on heart failure. However, the patient had severe orthopnea, old age, severe LV systolic dysfunction and elevated creatinine, so the risk of surgery was very high (Society of Thoracic Surgeons score 12). Accordingly, percutaneous coronary intervention with kissing stenting for LM bifurcation and balloon valvuloplasty first and then staged transcatheter aortic valve replacement were successfully performed [Figure 2]. As a result, the patient's symptoms, LV systolic function, and blood test results all improved.

Discussion: The decision making what can do for the case of decompensated congestive heart failure accompanied by coronary artery disease and severe AS of very high surgical risk is very difficult. Even though the interventional treatment was also difficult due to severe orthopnea, it was successfully done and the patient's symptoms and LV systolic function could be improved completely.



[Figure 1] Initial CAG :
Arrow indicates critical stenosis of LM to ostial LAD and ostial LCX.



[Figure 2]
Percutaneous coronary intervention with **kissing stenting for LM bifurcation(A)** and **balloon valvuloplasty(B)** first and then staged **transcatheter aortic valve replacement(C)** were successfully performed.