Two-vessel off-pump coronary artery bypass grafting by left thoracotomy in a complex redo case

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The left thoracotomy approach is an alternative technique for coronary revascularization to avoid complications associated with re-sternotomy, such as injury to patent grafts, right ventricle, aorta, during re-sternotomy.

Situations such as calcification of the ascending aorta and previous mediastinitis favor the use of the left thoracotomy approach.

Revascularization of the circumflex territory via a lateral thoracotomy has been reported previously. However, reports of revascularization of the LAD combined with circumflex artery territory via left thoracotomy approach are rare.

We successfully performed an off-pump CABG by left thoracotomy in a complex redo case to revascularize the LAD and obtuse marginal branch (OM) in an 83 year-old-man who had CABG and AVR in the past with a heavily calcified ascending aorta.

**Case Report**

- 83-year-old caucasian male
- History of CABG 20 years ago, redo CABG in the following year due to graft failure, and an AVR with a mechanical valve 12 years ago, and multiple coronary interventions.
- Presented with unstable angina
- Echo showed normal LV function
- Due to his history of early stent re-stenosis and location of the disease, he was considered not suitable for repeat PCI.
- CT scan showed severe calcification of the ascending aorta (left), and mild disease on the descending aorta.

**Conclusion**

Redo CABG is a technical challenge, but we were able to successfully undergo a 4th time redo CABG via the left thoracotomy approach and proximal anastomosis of the conduits in the descending aorta.

This technique in selected patients could be a useful that may reduce the complications related to redo sternotomy.