

PCI Intervention With ECMO Support – A Case Report

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Background:

Our patient was previously treated for Hodgkin's disease. As a result of radiotherapy he had a lot of scar tissue inside the thorax.

Now he suffered from unstable angina due to stenosis of the left coronary artery. This condition would generally have made him subject of CABG surgery. In these circumstances cardiac surgery was judged as being impossible, and the patient was instead offered to undergo treatment with PCI. It was considered necessary to make arrangements for full circulatory support and unload of the left heart. Thus it was decided to put the patient on ECMO during the PCI procedure.

Material:

Biomedicus® BP 80 centrifugal pump, Affinity® oxygenator (Medtronic), and Biomedicus® cannulae were used. All equipment were Carmeda® coated.

Method:

The patient was put under anaesthesia in the OR. Arterial and venous cannulae were inserted percutaneously, and the patient was put on ECMO on a low flow. (1,8 l/min). He was transported from the OR to the PCI lab, where the PCI procedure with stenting was successfully performed. Free blood flow through the coronary vessel was confirmed by intravenous ultrasound, IVUS.

After this, the patient was transported back to the OR, where the ECMO treatment was terminated.

The postoperative course was uncomplicated. The patient was discharged from hospital to home three days later, in good condition.

Conclusion:

The case was our first experience with this method, combining the knowledge and skills of cardiologist, cardiac surgeon, anaesthesiologist and perfusionist at the same procedure. These multi-discipline procedures might appear more commonly in the future, and increase possibilities for treatment of cardiac patients.