



Introduction

- The less invasive approach to conventional surgical revascularization is minimally invasive coronary surgery artery bypass grafting (MICS CABG).
- MICS CABG has considerable benefits over the conventional coronary artery bypass grafting procedure.
- This case report presents quadruple coronary artery bypass with triple inflow performed off-pump without touching the aorta

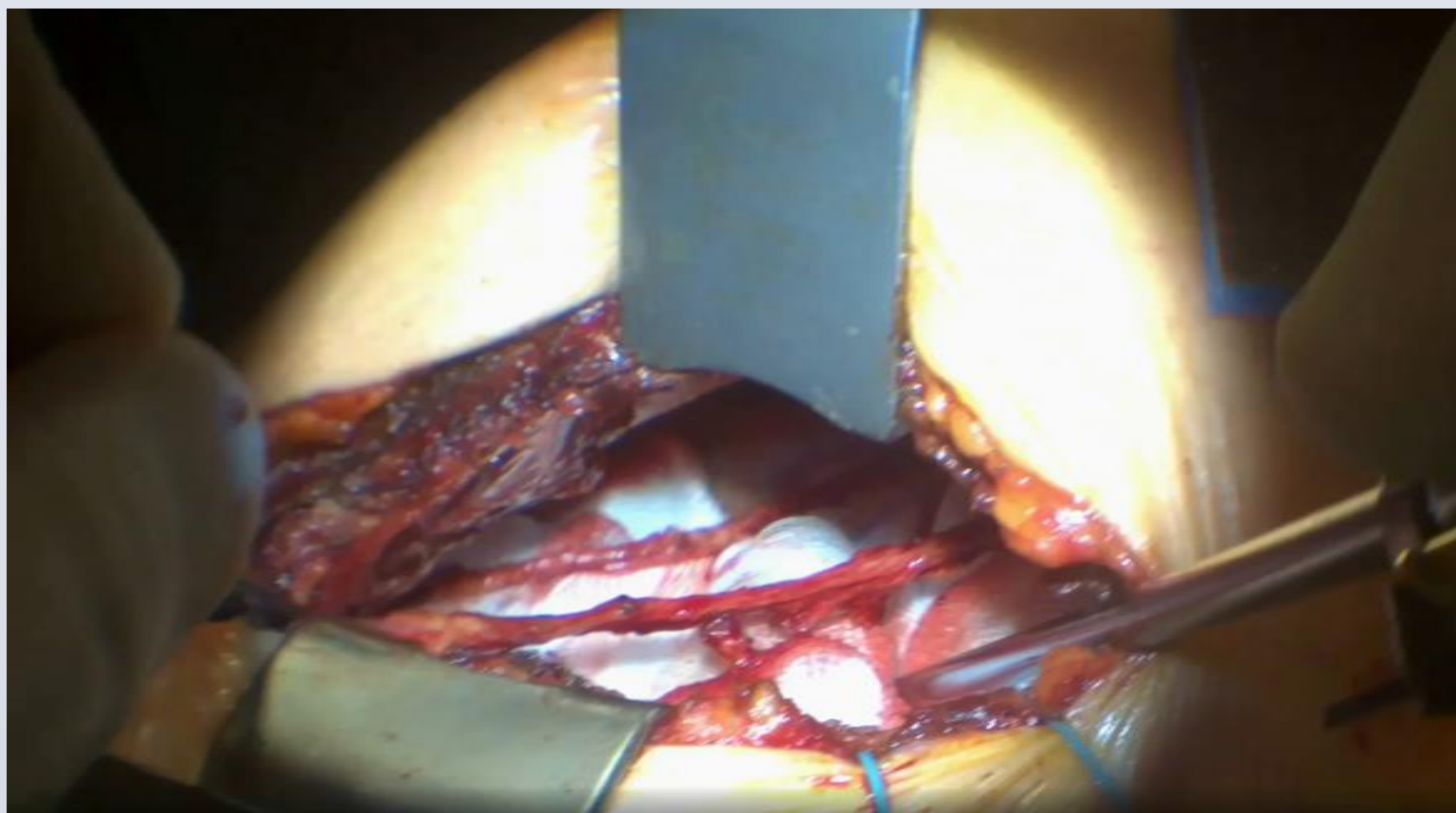
Case presentation

- A 74-year-old man with multivessel disease,
- Chronic disease- Dyslipidemia and hypertension
- Ejection fraction 55%
- End-diastolic diameter was 57, end-systolic diameter was 42
- Byohumoral analysis was in the reference range
- The patient was scheduled for an elective operation program

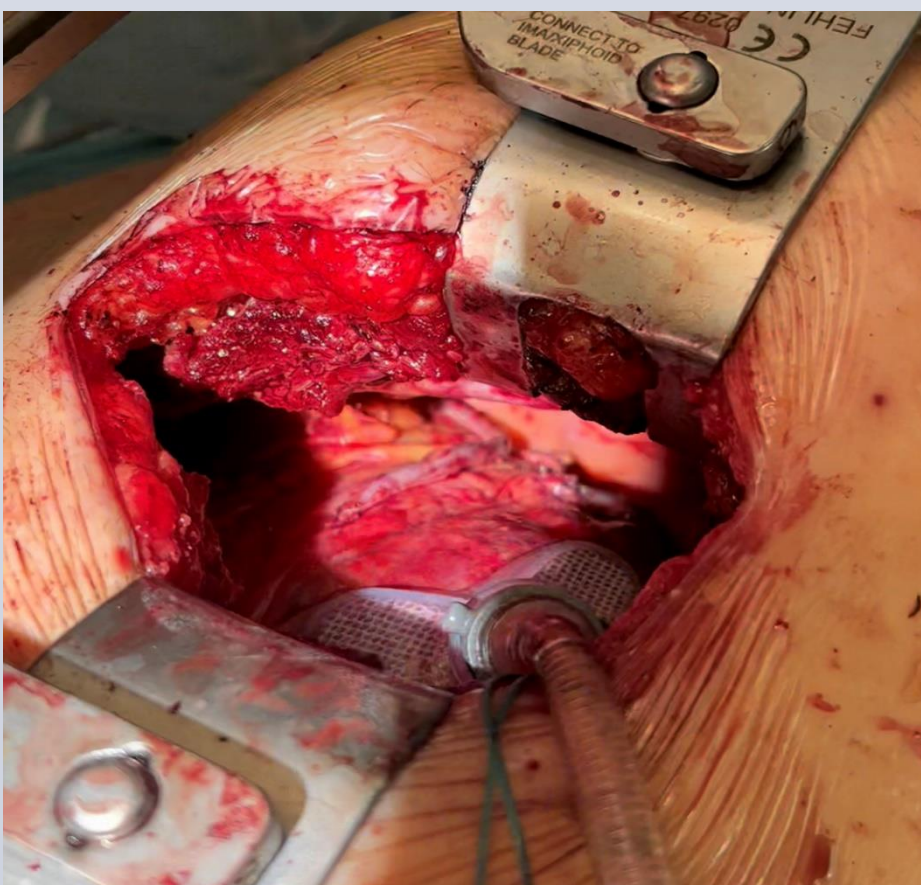
Table 1. Anastomosis construction and transit time flow measurement (TTFM) results

Inflow	Target vessel	TTFM		Anastomosis
		MF	PI	
LIMA	OM1	19	2.2	L-L
	DG	17	1.8	T-L
RIMA	LAD	46.5	2.5	T-L
RGEA	PDA	12.7	2.8	T-L

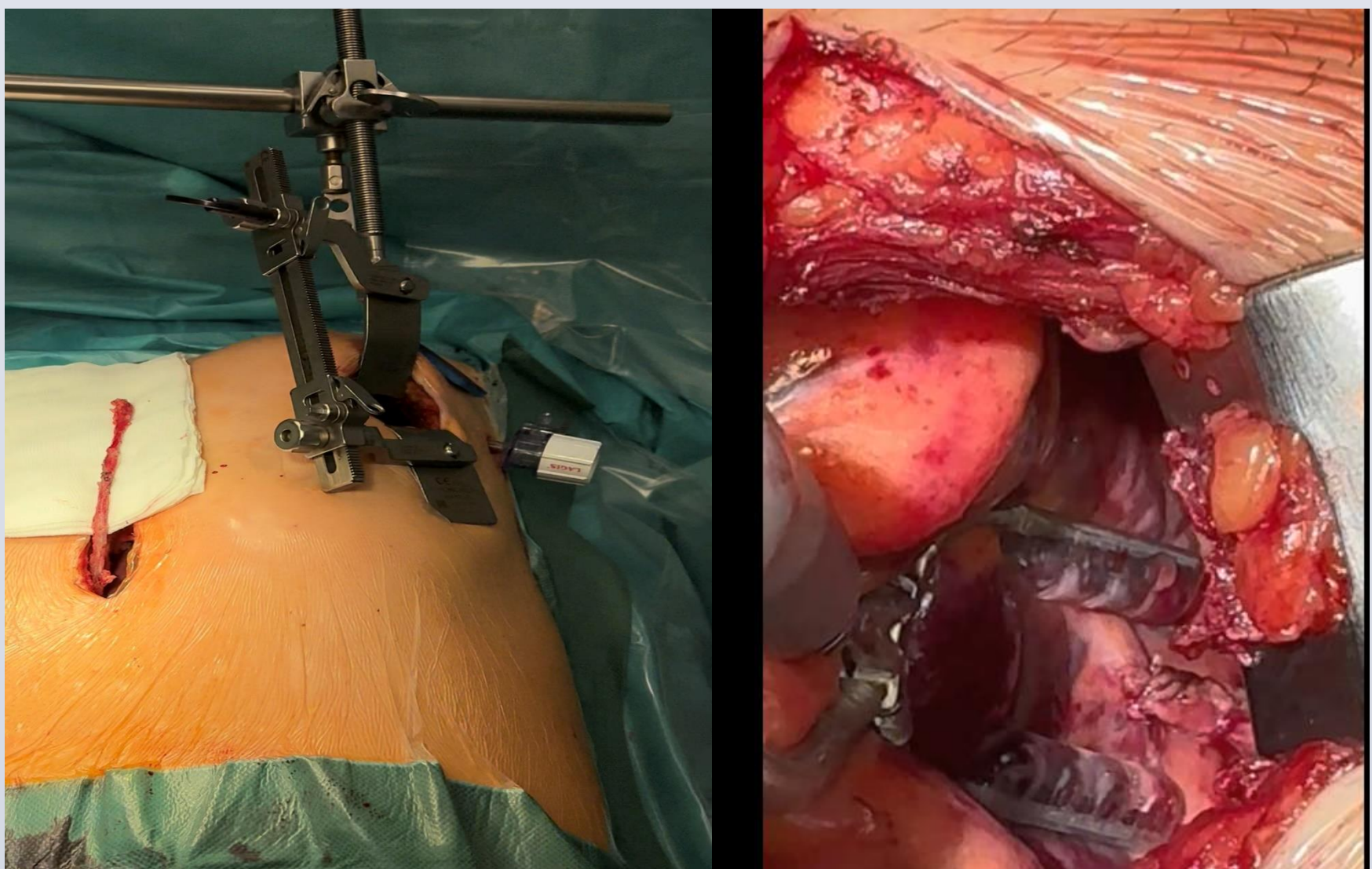
TTFM-transit time flow mesurment; LIMA-left intrathoracic mammary artery; RIMA-Right intrathoracic mammary artery; RGEA-right gastroepiploic artery; T-L termino-lateral; L-L latero-lateral (sequential)



LIMA and RIMA



LIMA and RIMA anastomosis



Right gastroepiploic artery

Case presentation

- A double tracheal tube was placed.
- Conduits were harvested under direct vision in a skeletonized fashion
- : Through left thoracotomy, the right and left internal mammary arteries (RIMA and LIMA) were harvested
- Through upper mini laparotomy was harvested right gastroepiploic artery (RGEA)
- Final construction of anastomosis was (LIMA-OM1-DG; RIMA-LAD; RGEA-PD)
- Patient was without complications, and was discharged on the four postoperative day

Conclusion

- Minimally invasive off-pump total arterial CABG is a feasible strategy for multivessel coronary disease
- Triple inflow has encouraging short-term results, but still needs long-term follow-up with a large number of patients to become standard practice in a surgical center.

References

1- Tavilla G, Bruggemans EF, Putter H. Twenty-year outcomes of coronary artery bypass grafting utilizing 3 in situ arterial grafts. J Thorac Cardiovasc Surg. 2019

2. Niinami H, Endo Y, Morita K, et al. Long-Term Outcomes Following Off-pump Coronary Artery Bypass Grafting Using Only 3 In situ Arterial Grafts. Eur J Cardiothorac Surg. 2025