



Introduction

- Coronary disease - of the most widespread global health burdens, with a growing tendency
- Total arterial revascularization have good long-term myocardial perfusion
- This goal could be achieved only with arterial grafts
- A broad spectrum of arterial conduits may simplify total arterial revascularization

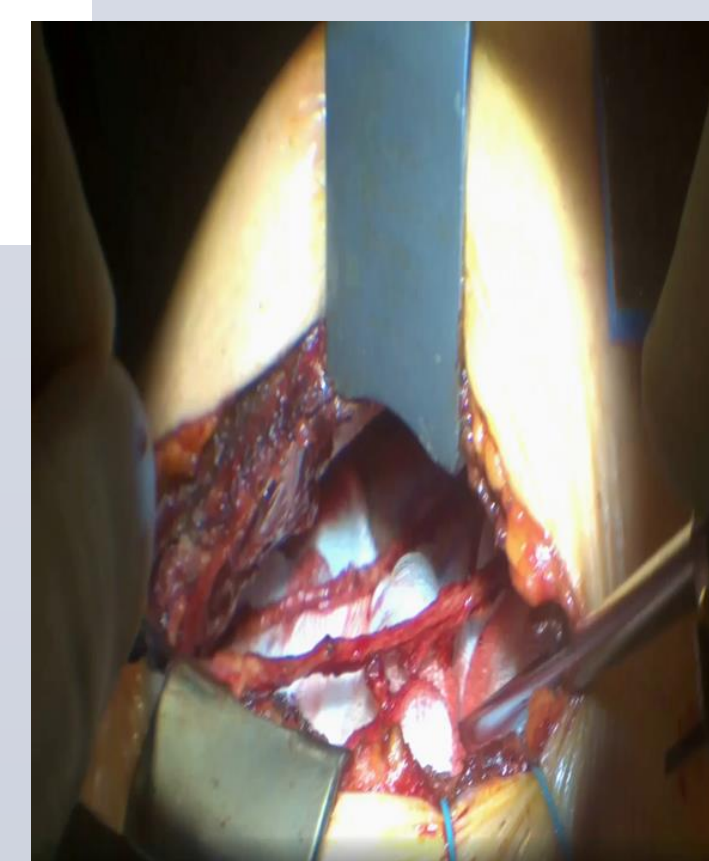
Material and methods

- Cross-sectional study, Single-center experience,
- October 2023 – December 2025
- University Clinical center of Serbia, Clinic for cardiac Surgery
- Participants – All patients who underwent MICS CABG
- Conduits were harvested in direct view, in sclotonized fashion

Table 1. Characteristic of conduits, harvesting with an electrocautery and ultrasonic device

Variable	Harvesting Tools	TTFM	Complications	Harvesting time	Non-touch technique	Incision to access harvesting
LIMA No-251	Electrocautery No-27	37.29±20.2	Disection No-1	26 +-11 .6	/	Left thorachotomy
	Ultrasonic device No-224	37.31±19.9	Disection No-1	20 +-5.1	/	Left thorachotomy
RIMA No-39	Electrocautery No-5	26.01±18.1	Disection No-1	33 +-7.8	/	Left thorachotomy
	Ultrasonic device No-34	26.11±15.8	/	24 +-4.6	/	Left thorachotomy
RA No-98	Electrocautery	/	/	/	/	/
	Ultrasonic device No-98	21.11±8.2	Infectious of harv. site No-3	12 +-3.1	98	Longitudinal forearm incision
RGEA No-12	Electrocautery	/	/	/	/	/
	Ultrasonic device No-12	17.21±13.4	Ventralis hernia No-2	15+- 5.3	12	Subxiphoid incision
IEA No-8	Electrocautery	/	/	/	/	/
	Ultrasonic device No-8	20.08±12.4	Intraop. Bleeding No-2	16+-3.4	8	Semi- Pfannenstiell incision

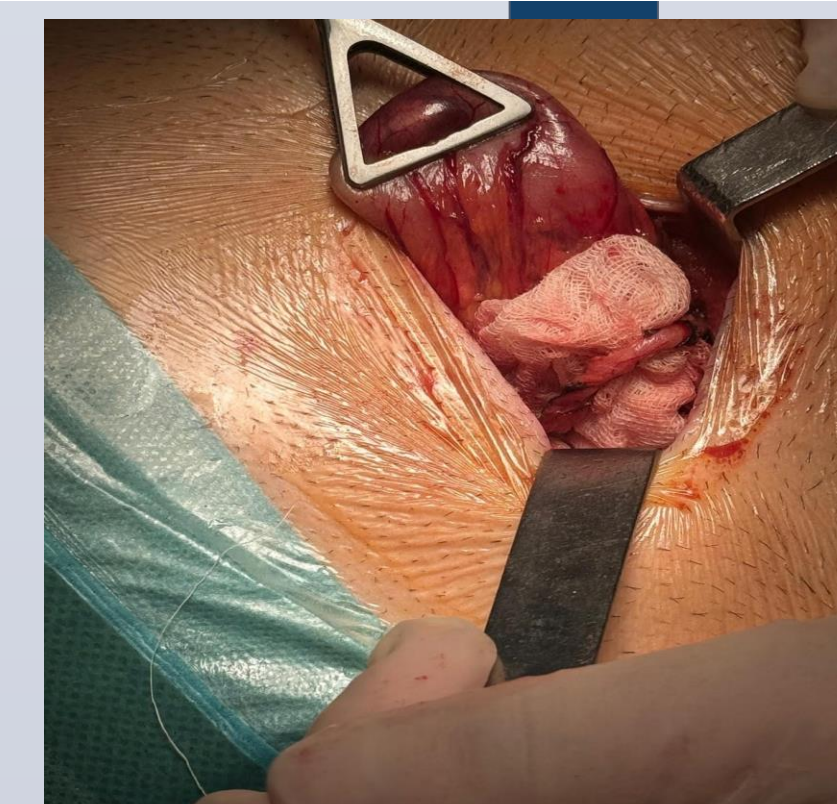
TTFM-transit time flow mesurment; LIMA-left intrathoracic mammary artery; RIMA-Right intrathoracic mammary artery; RA-radial artery; RGEA-right gastroepiploic artery.



LIMA and RIMA



Radial artery



Right gastroepiploic artery



Inferior epigastric artery



Results

- Include 253 patient, who underwent MICS-CABG operation
- Mean age 67.5 ± 8.2
- BMI 27.09±4.1
- Gender ratio Male : Female 4.8 : 1
- LIMA was used in 251 casses,
- Second most used graft was radial artery in 98 casses
- CT angiography confirmed optimum graft patency – 96.3 %,

Conclusion

- Minimally invasive off-pump total arterial CABG is a feasible strategy for multivessel coronary disease, particulary when a multiple arterial conduits are available
- Harvesting with harmonic device and no-touch technique may reduce conduit injury and vasospasm.
- Careful atraumatic conduit preparation is associated with favorable early graft outcomes