Hybrid Coronary Revascularization In Multivessel Coronary Artery Disease - Who Can Benefit Most? A Pilot Study

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OBJECTIVES

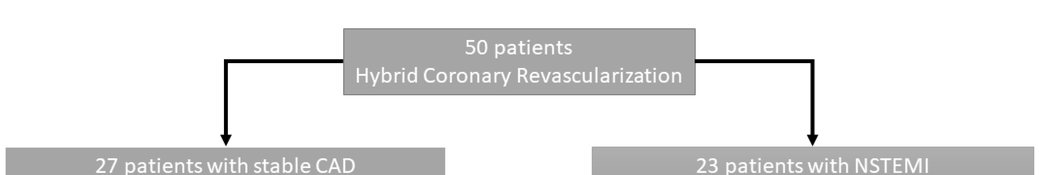
- MIDCAB allows to avoid the burden of open-chest procedure and maintain the benefit of LIMA to LAD graft
- HCR - MIDCAB combined with PCI, can be an effective strategy to obtain complete revascularization (CR), while reducing the periprocedural risk.
- In all previous RCTs on HCR the eligibility for all revascularization strategies was an inclusion criteria

MATERIAL AND METHODS

- Real-life data registry study
- The registry includes two novel groups of patients for HCR - NSTE-ACS and SCAD with contraindications to both conventional multivessel CABG (in regard to median sternotomy or predicted completeness of surgical revascularization) and multivessel PCI (high LAD lesion complexity)

RESULTS

- Patients with SCAD had higher perioperative risk and LM stenosis was more common
- Prior to MIDCAB, NSTE-ACS group received DAPT more frequently, however, no difference in 24-hours chest-tube output was reported
- In all cases, CR was achieved
- COMPLICATIONS: SCAD group - 1 case of post-surgery low cardiac output syndrome, 1 case of postoperative myocardial infarction with sudden cardiac arrest and successful emergent LM/Cx PCI (SCAD group); NSTE-ACS - 1 case of pleural hematoma requiring surgical intervention
- All patients remained alive at 30-day follow-up after the completion of HCR



	stable CAD	NSTEMI	p value
EuroSCORE II*	2.28 (1.45-3.34)	1.21 (0.82-1.47)	0.001
Overall SYNTAX score*	25.0 (20-34)	25.25 (16.25-31)	0.533
LAD SYNTAX score*	16 (11-17)	13 (9-20.75)	0.657
LM stenosis, n (%)	7 (29.2)	1 (4.3)	0.024
2-vessel disease, n (%)	19 (70.4)	10 (43.5)	0.055
Triple vessel disease, n (%)	8 (29.6)	13 (56.5)	
Age [years]*	70.5 (63-78)	67.0 (57-73.5)	0.023
Peripheral artery disisease, n (%)	13 (48)	2 (8.7)	0.002
GFR [ml/min/1,73 m²]*	64.0 (58-83)	79.5 (69-88.5)	0.048
DAPT, n (%)	16 (59.3)	23 (100)	0.001
24-hours chest-tube output [ml]*	430 (270-500)	375 (350-585)	0.961
post-MIDCAB cTnI levels [µg/L]*	0.06 (0.04-0.13)	0.07 (0.05-0.10)	0.546

Complete revascularization achieved in all cases with 100% survival at 30-days follow-up

*median (Q1-Q3) is presented

CONCLUSION

HCR can be a safe strategy that allows achieving CR among patients with high LAD-lesion complexity and contraindications to multivessel CABG both in SCAD and NSTE-ACS

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