

A SINGLE-CENTER EXPERIENCE WITH MINIMALLY INVASIVE DIRECT CORONARY ARTERY BYPASS SURGERY

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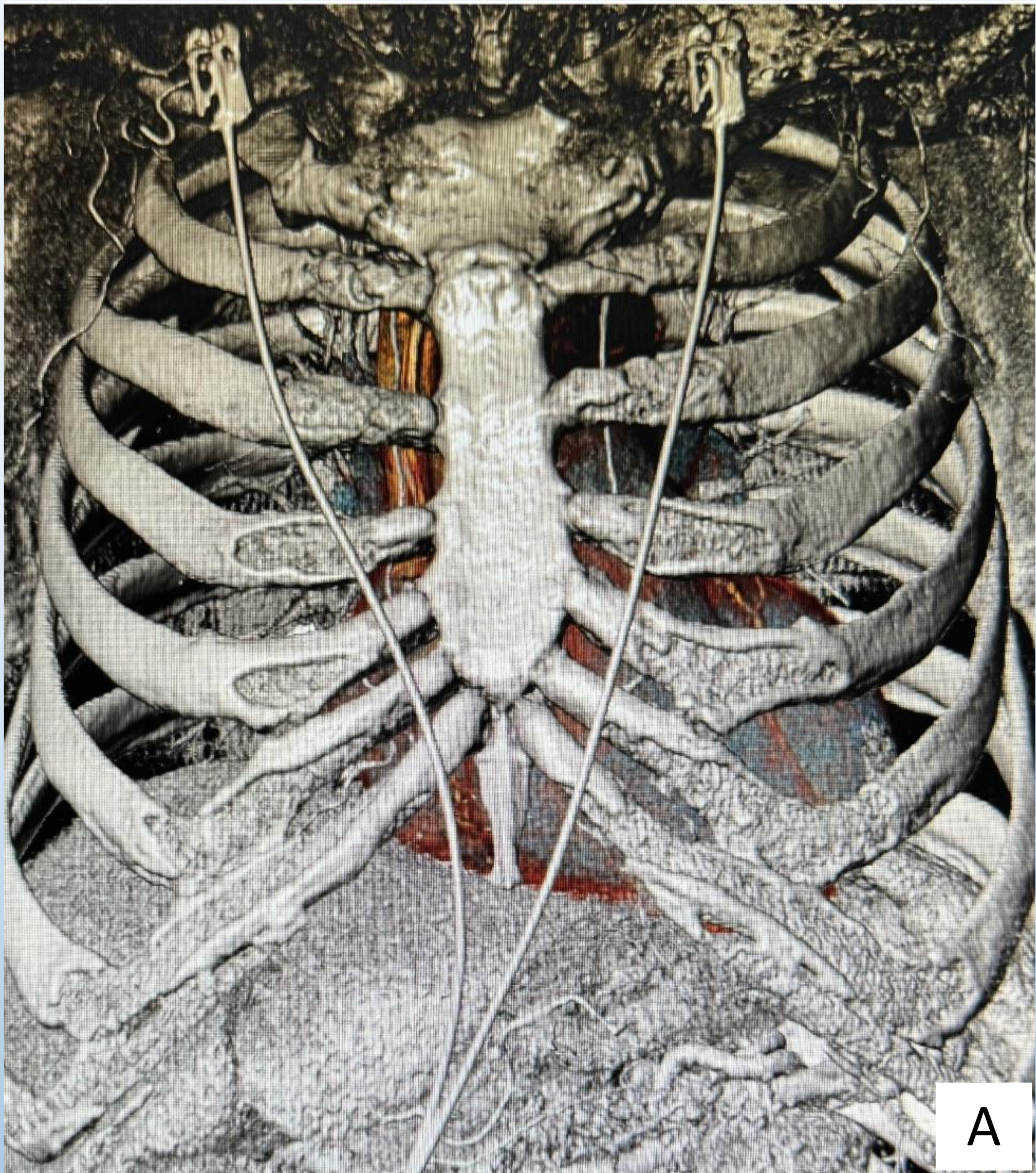
INTRODUCTION

Minimally invasive direct coronary artery bypass grafting (MIDCAB) through a left anterior minithoracotomy presents a strategy for revascularization of the left anterior descending artery (LAD) and its branches. Main advantages are avoiding sternotomy and cardio-pulmonary bypass and the possibility for hybrid coronary revascularization (HCR).

METHODS

- Between January 2018 and September 2024, 329 patients underwent MIDCAB surgery at our center
- All patients received revascularization of the left anterior descending artery using the left internal thoracic artery (LITA)
- 27 (8 %) patients received additional revascularisation of diagonal vessels in sequential or Y-graft technique using a saphenous vein graft
- In 143 (43 %) patients, a two stage HCR was performed with 122 (85.9 %) receiving surgery first
- Retrospective review of pre-, intra-, and postoperative data.
- Endpoints: 30-day mortality, mid-term survival and rate of perioperative complications

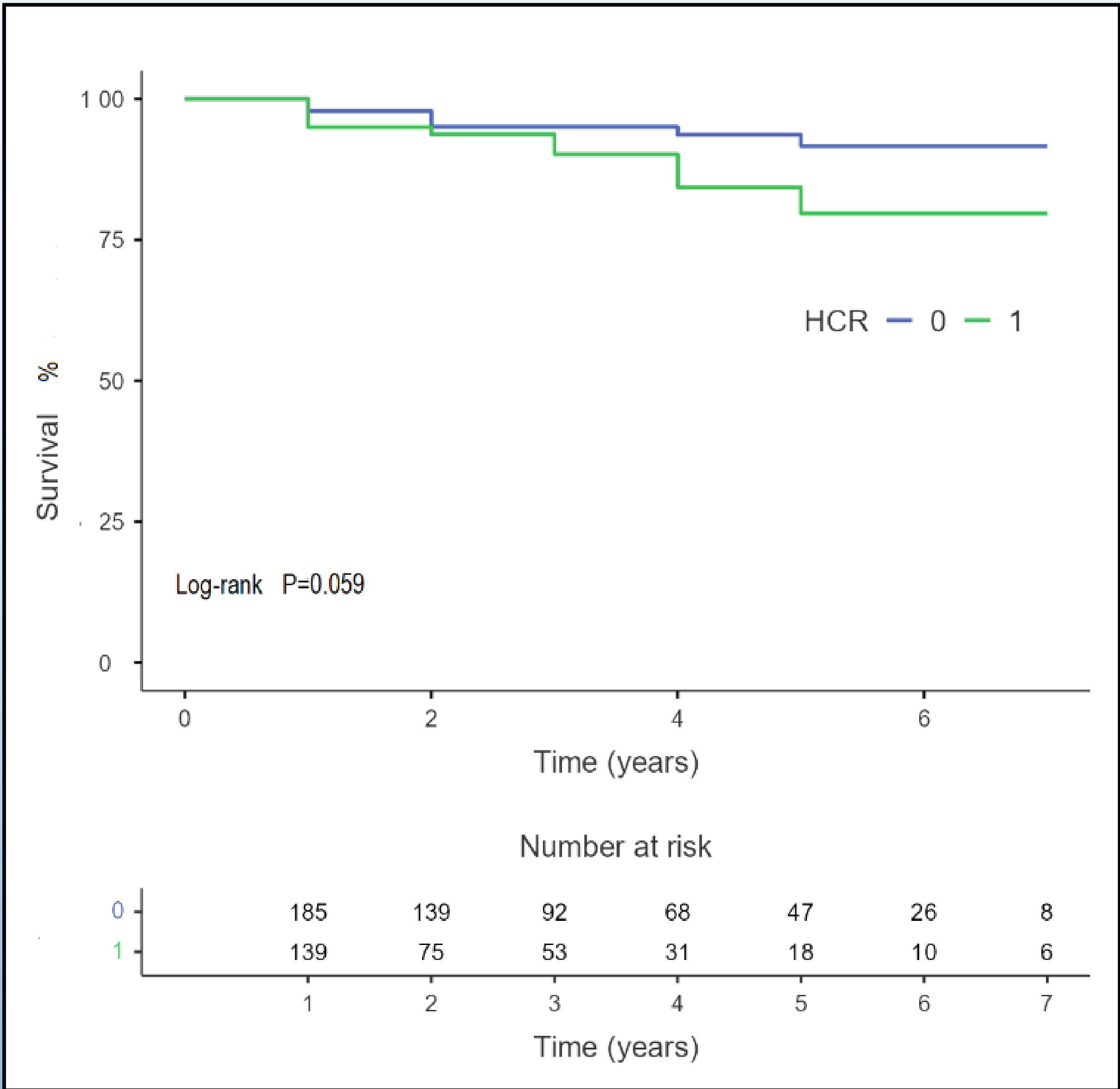
BASELINE CHARACTERISTICS	
Age (years), median	69
Female, n (%)	76 (23)
BMI (kg/m²), mean (SD)	27.72 (4.9)
Atrial fibrillation, n (%)	38 (11.55)
Hypertension, n (%)	300 (91.19)
Diabetes, n (%)	116 (35.26)
Left ventricle ejection fraction (%), mean (SD)	56.36 (10.4)
COPD, n (%)	28 (8.51)
Renal insufficiency, n (%)	81 (24.62)
Euroscore II (%), median	1.5



Feasibility of a minimally invasive access through a 5 cm incision in the 4th intercostal space, *A* 3D-reconstruction showing anatomical relation between LAD and LITA, *B* LITA harvest using a special rib retractor.

RESULTS

POSTOPERATIVE OUTCOMES	
Hospital stay (days), median	6
Conversion to sternotomy, n (%)	4 (1.2)
Re-exploration due to bleeding, n (%)	10 (3)
Re-operation due to bypass revision, n (%)	0 (0)
Stroke, n (%)	2 (0.6)
Wound infection, n (%)	15 (4.6)
Dialysis, n (%)	0 (0)
30-day mortality, n (%)	6 (1.8)
Mortality during follow-up, n (%)	22 (6.7)
Follow-up period (months), median	27



CONCLUSION

Our data confirms, that MIDCAB is a very safe and feasible minimally invasive procedure with very low perioperative mortality and morbidity and excellent mid-term survival. In our opinion, it is essential to consider MIDCAB procedure in order to be able to offer patients an optimal personalized revascularisation strategy, especially in regard to possible HCR.