



Clinical Outcomes of Cor-Knot Micro Application in Robotic-assisted Coronary Artery Bypass Grafting.

Aleksander Dokollari; Serge Sicouri; Leila Hosseinian; Ozgun Erten; Basel Ramlawi; Francis Sutter; Gianluca Torregrossa

BACKGROUND

The use of Micro Cor Knot device to complete hand sewn anastomosis during Robotic assisted MIDCABG has not been investigated.

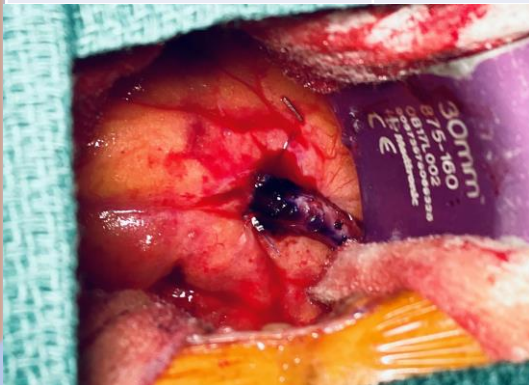
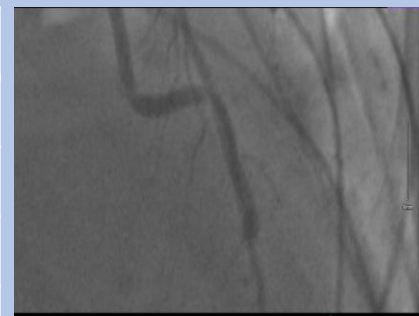
AIM

To investigate the use Micro Cor Knot preferentially during Hybrid Procedures in order to have Angiographic confirmation of left internal thoracic artery (LITA) – left anterior descending (LAD) patency and visualize the Micro fastener .

METHODS

All consecutive patients undergoing isolated CABG through left thoracotomy between July 2021 and July 2022 from a single surgeon were included in the study. Patients using the Cor-KNOT device for fastening the LITA-LAD anastomosis were included.

Follow-up Clinical Outcomes	Patients N=31
Cardiac Readmission n (%)	5 (16.1%)
Overall Death n (%)	1
Cardiac Death n (%)	0
Repeat Revascularization n (%)	0
Myocardial Infarction n (%)	0
Stroke n (%)	0
MACCE n (%)	1 (3.7%)
Angina n (%)	0
Mild/Moderate/Severe Angiographic Stenosis of anastomosis n (%) Total = 20	0
Time to Angiography days mean ± SD	19.9 ± 30



RESULTS

A total of 31 patients with a mean age of 70.07 ± 10.8 years, and an STS-PROM risk score of 1.5 ± 1.3% were included. All patients had LITA graft anastomosis to the LAD and 67.7% of them were extubated in the operating room. Mean graft flow of LITA was 67.2 ml/min and there was no perioperative myocardial infarction. Mean postoperative ventilation time was 1.6 ± 8.3 hours, and there was no conversion to full sternotomy. Post-operatively there were no reoperation for bleeding. There was one 30-day mortality due to iatrogenic liver injury in another institution. Mean follow-up was 5 months. Angiographic findings at follow-up (total=20) found no stenosis of the anastomosis.

CONCLUSION

COR-Knot Micro procedure for robotic-assisted CABG provides good mid-term angiographic findings and clinical outcomes in selected patients.