

Thoracoscopic Assistance in MIDCAB Procedure

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OBJECTIVE:

To analyze effectiveness of thoracoscopic assistance at MIDCAB procedure in patients with isolated LAD stenosis

No disclosures.

1

514 patients with left anterior descending artery (LAD) lesion were enrolled in the study:

1 group (139)

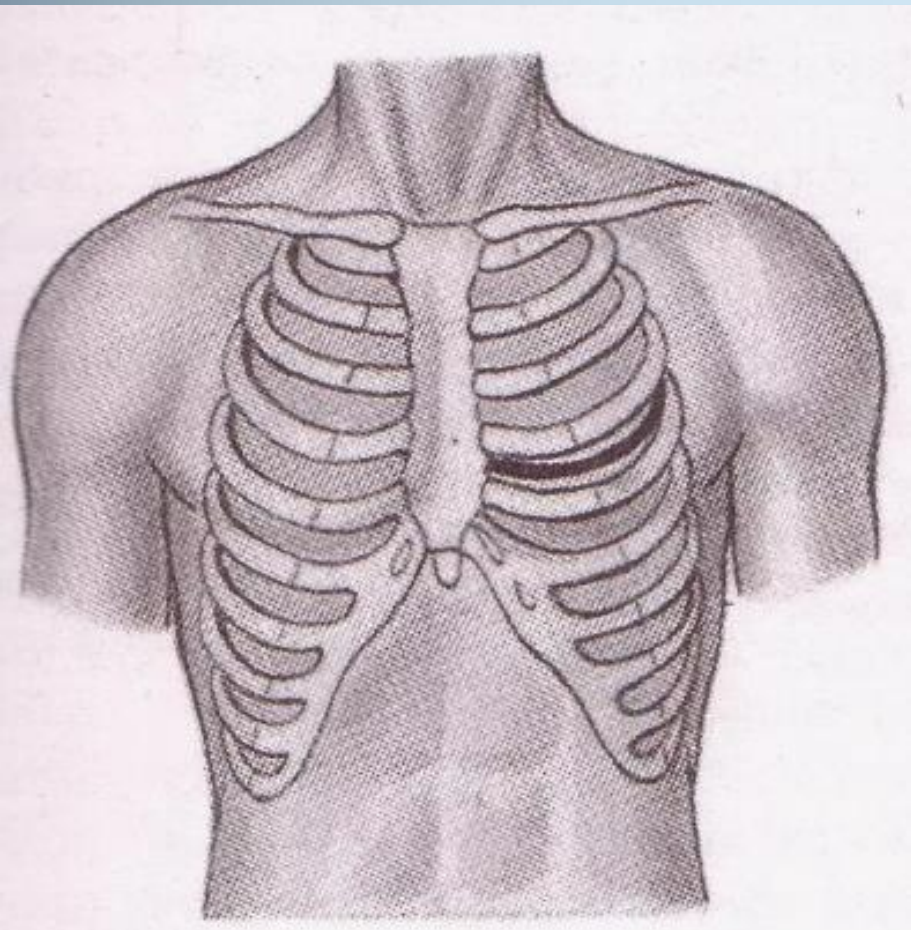
MIDCAB procedure
by direct vision

2 group (375)

MIDCAB procedure
with thoracoscopic
assistance.

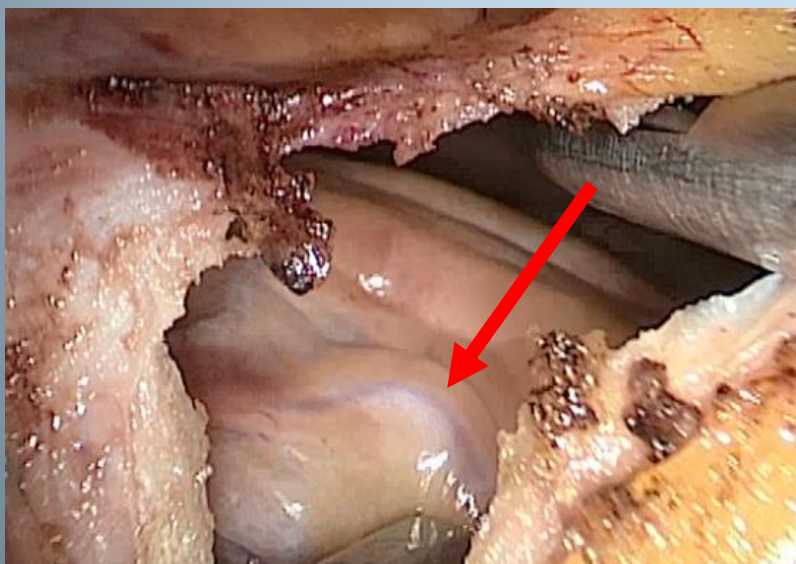
2

LIMA to LAD 100% cases

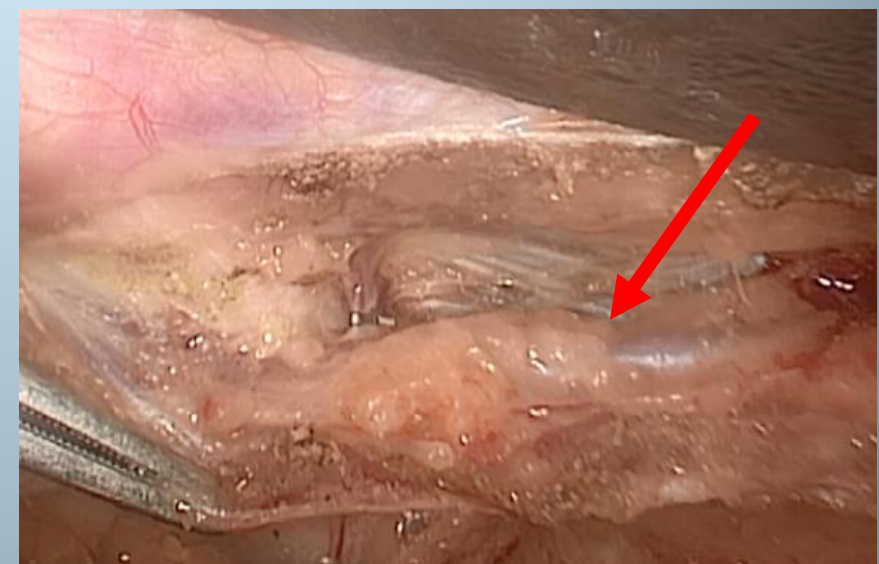


3

Surgical technique



Pleuro- and
pericardioscopy
(2nd group)

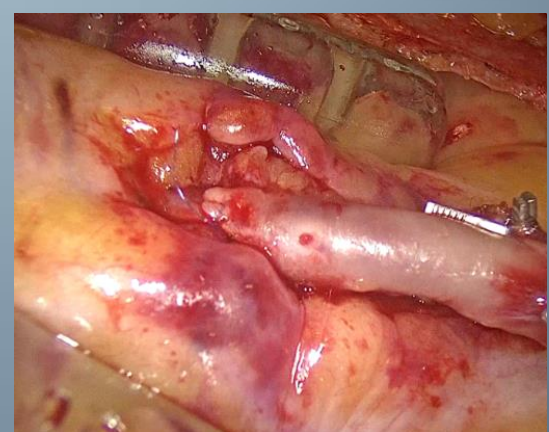
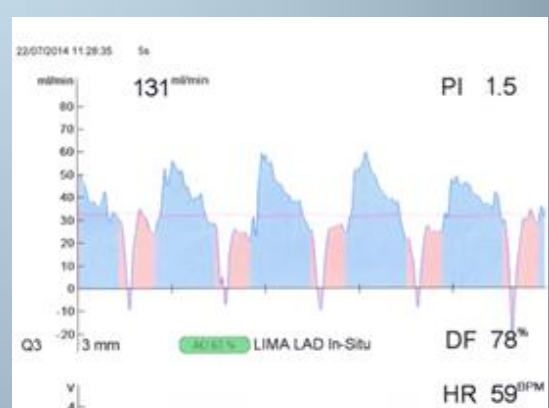
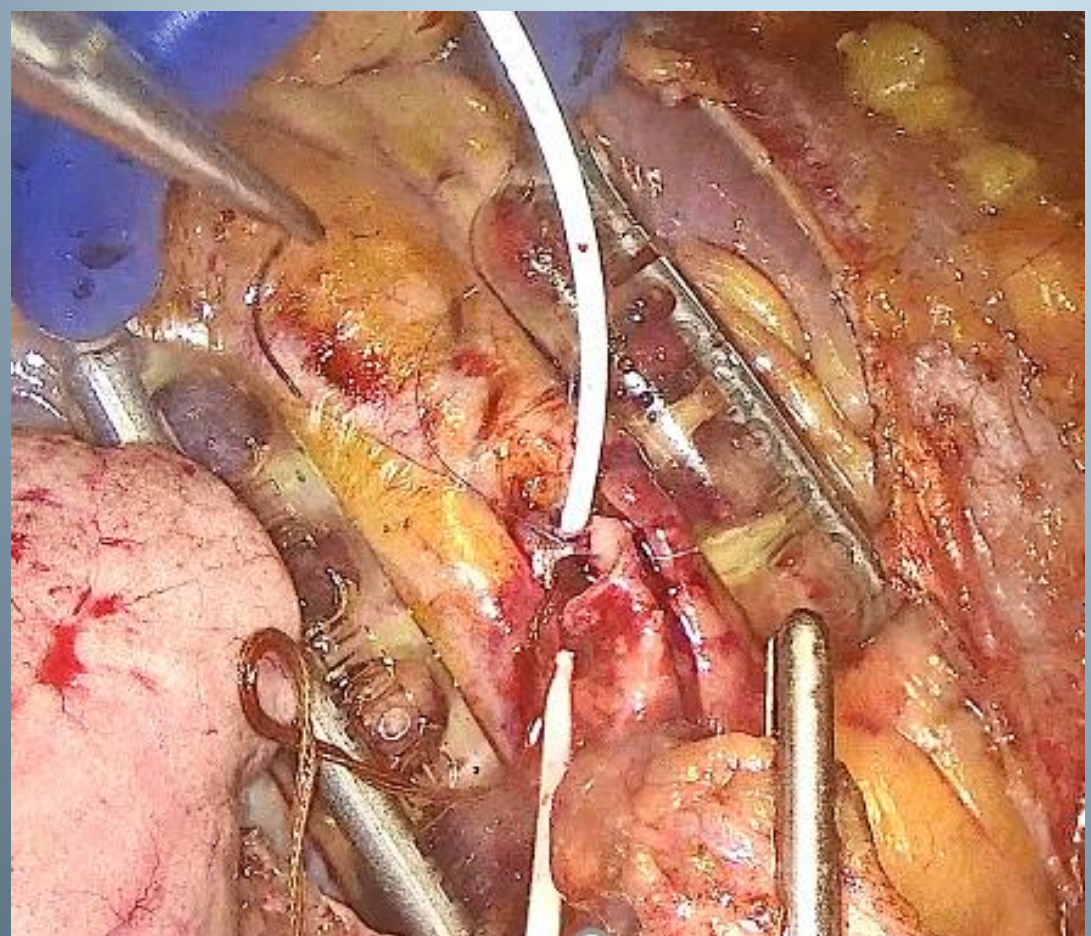


LIMA harvesting with
thoracoscopic assistance
(2nd group)

4

Surgical technique

(intracoronary shunts and TTFM control)



In-hospital results

MIDCAB direct vision
N=139

MIDCAB with thoracoscopy
N=375

Mortality 0%

MACCE 0%

Wound complications (12) 8,6%

Conversion to sternotomy (8) 5,7%

Mortality 0%

MACCE 0%

Wound complications (3) 0,8%

Conversion to sternotomy (4) 1%

7

In-hospital results

Both methods have demonstrated high efficacy and safety. All patients underwent off-pump LIMA-LAD grafting via MIDCAB. Good patency of the grafts were confirmed with flowmetry in at the OR.

8

Both metods are safe

There were no deaths, MACCE, repeated revascularization in the in-hospital period. The average in-hospital stay was $7 \pm 1,9$ days. Blood loss was 240 ± 57 ml, ICU length of stay was 16 ± 3.9 hrs.



9

But...

There were statistical differences in in-hospital and 1-month follow up results: operation time in the second group was shorter (181 ± 34 min in the first group and 138 ± 26 min in the second group).

Clinical characteristic	MIDCAB all (n=514), %	Direct Vision (n=139), %	Thoracoscopic (n=375), %
Age, M $\pm$ SD	61,3 $\pm$ 13,8	59 $\pm$ 11,2	62,1 $\pm$ 10,4
Male, n (%)	360 (70)	105 (72)	255 (68)
Diabetes, n (%)	113 (22)	29 (20)	84 (22,5)
Hypertension, n (%)	401 (78)	103 (74)	298 (79,5)
PICsclerosis, n (%)	287 (56)	67 (48)	220 (58)
EF, %, M $\pm$ SD	54 $\pm$ 7,4	55 $\pm$ 6,9	56 $\pm$ 5,6
Stroke, n (%)	41 (8)	12 (8,6)	29 (7,7)
Smoker, n (%)	258(50)	68 (48)	190 (50,6)
EuroScore II, %, M $\pm$ SD	1,7 $\pm$ 0,76	1,81 $\pm$ 0,83	1,6 $\pm$ 0,97

No significant differences between groups

6

There were 8 conversions to sternotomy (5,7%) in the first group, mainly because of LIMA damage. There were 4 conversions to sternotomy (1%) in the second group. We suppose that the difference in conversions rate ($p=0,03$) were caused by better thoracoscopic visualization.

11

At 1-month follow-up the incidence of wound complications were 12 cases in the first group (8,6%) (caused by retraction injury) and 3 cases in the second group (0,8%) ($p=0,001$).

12

1 year follow up



13



MIDCAB 2011



MIDCAB 2024

14

Conclusions:

It should be noted that MIDCAB with thoracoscopic assistance have better results than MIDCAB by direct vision. We consider thoracoscopic assistance as a part of MIDCAB technique.

15