

Clinical results of off pump MICS CABG under multi arterial strategy by two experienced surgeons



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INTRODUCTION

In off-pump MICS CABG, reproducibility for experienced surgeon is still controversial. We would like to share the results of MICS CABG of our group and assess this surgical procedure can be a standard and reproducible surgery to other surgeons.

STRATEGY OF MICS CABG

1, Off pump. 2, left small thoracotomy. 3, Direct vision. 4, Multi arterial grafting based on BITA. 5, Complete revascularization.

CONTRA INDICATION

1, Emergency case. 2, Poor EF<40%. 3, Heart failure. 4, Severe COPD. 5, Severe chest wall deformity

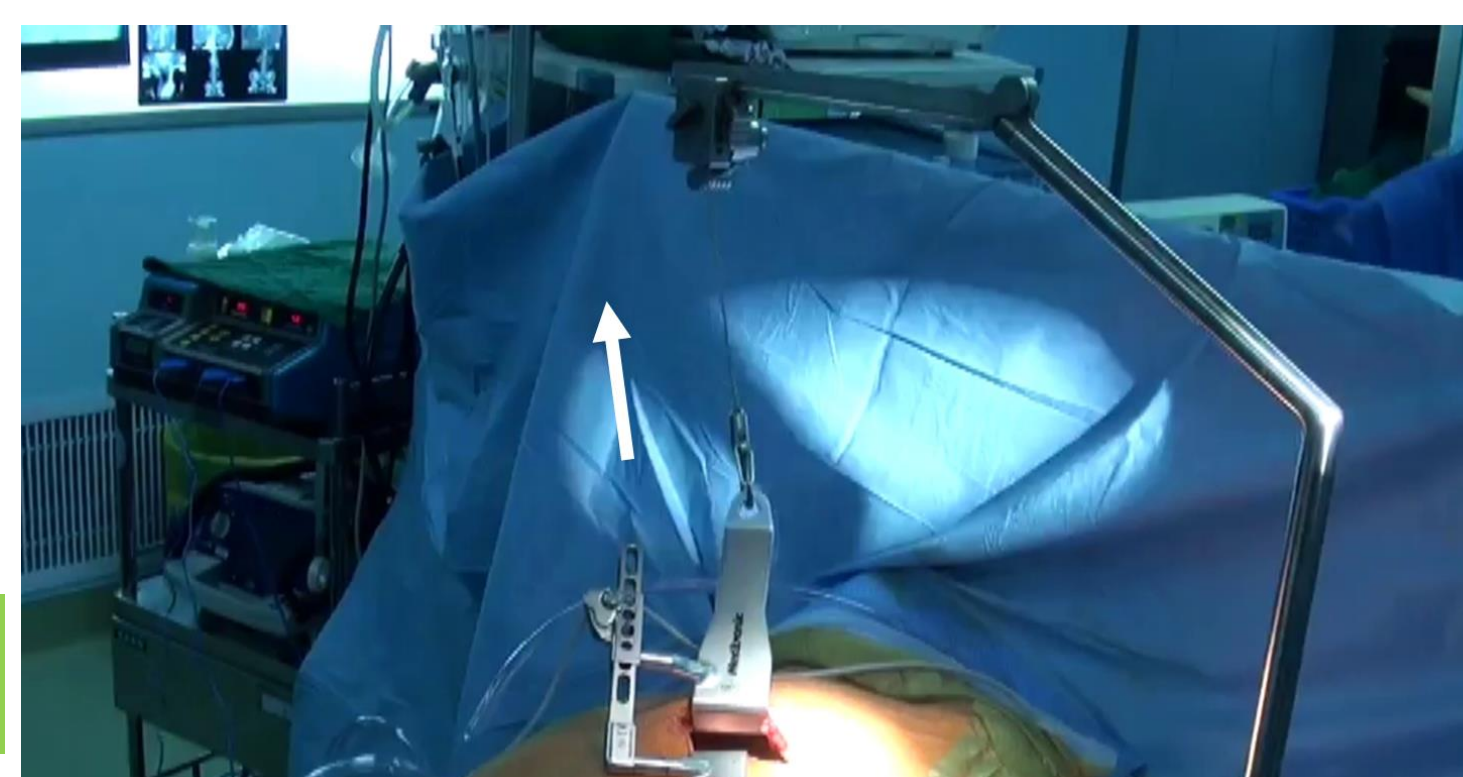
OBJECTIVE AND METHODS

From February 2012 to September 2022, 285 (222/63) consecutive patients who underwent MICS CABG by two experienced surgeons were reviewed retrospectively.

1, BITA harvesting

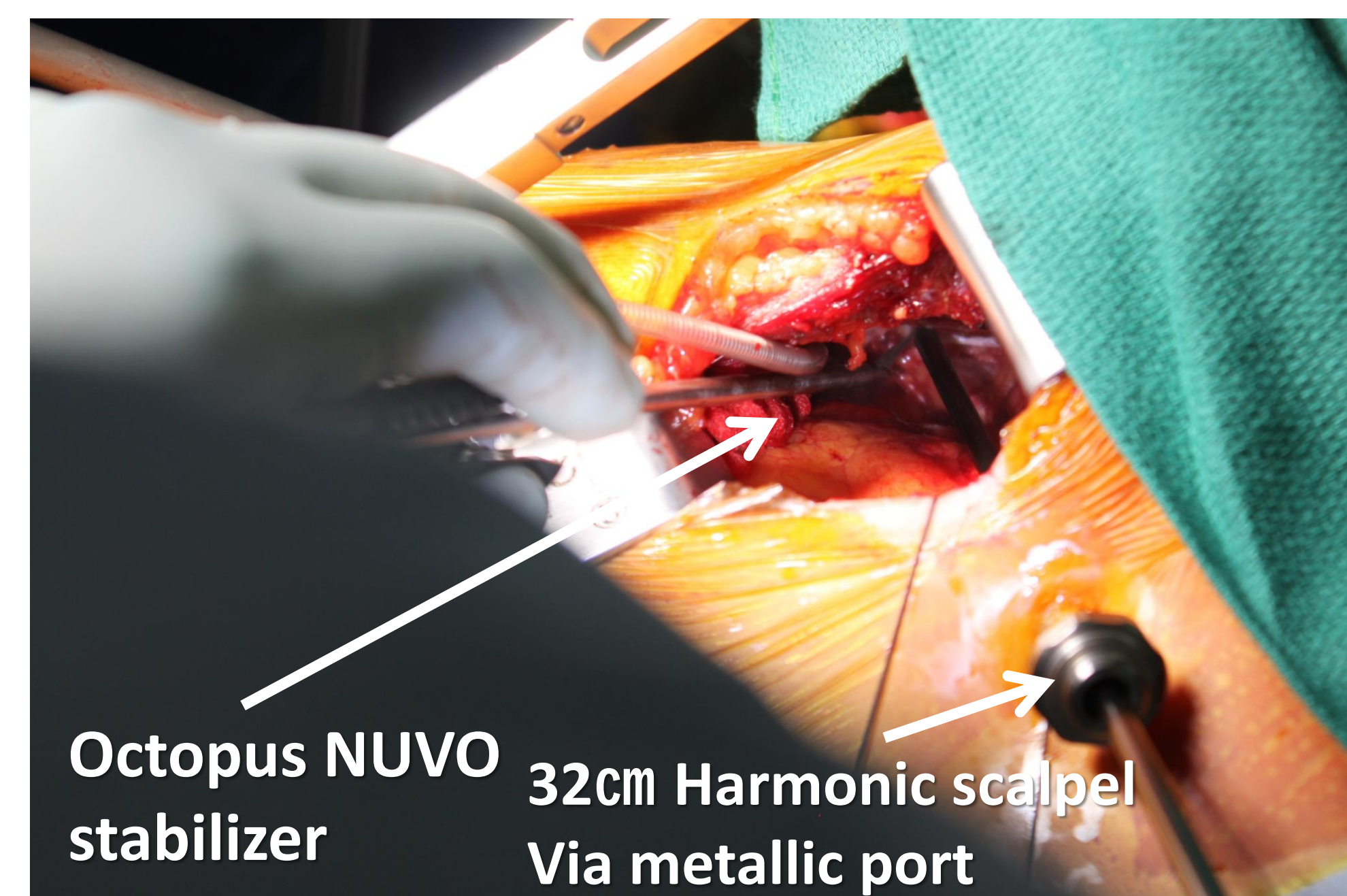
The mediastinal space is dissected and the right lung is depressed using an octopus NUVO stabilizer inserted via subxiphoid incision.

ITAs are harvested using a long shaft Harmonic scalpel is used via metallic trocar with skeletonized fashion.



2, Distal anastomosis

Three deep pericardial sutures (DPS) are put on the deep pericardium like usual OPCAB. Distal anastomoses are performed as in standard OPCAB using usual suction type stabilizer.



RESULTS

Multi vessel MICS CABG was performed in 240/285 cases

Table 1. Pre-OP characteristic

Female	21.1% (60/285)
Age, years	66.0 ± 11.4
LVEF (%)	57.5 ± 9.7
LVDd,mm	49.4 ± 6.2
Emergency	2.1% (6/285)
Left Main	24.2% (69/285)
SVD	14.4% (41/285)
DVD	28.8% (82/285)
TVD	56.8% (162/285)
EF<40%	13
HD	25

Table 2. Clinical results

Operative time, min	282.3 ± 103.9
sternotomy	0
On pump	1.1% (3/285)
BTF	19.6% (56/285)
Extubation in OR	26.7% (76/285)
Anastomoses, overall	2.7 ± 1.1
Anastomoses, MVST	3.0 ± 0.9
Graft usage	
BITA	137
LITA	281
RITA	138
RA	33
rGEA	40
SVG	132
MAG	165
TAG	108
Re-opening	2.5% (7/285)
Mortality	0.004% (1/285)
ICU stay	3.0 ± 2.4
Hospital stay	14.6 ± 18.1



CONCLUSIONS

1. Clinical results of off-pump MICS CABG with multi arterial grafting was satisfactory.
2. This approach has the potential for further optimization with revascularization strategies for experienced surgeons.
3. Off-pump MICS CABG with BITA has a possibility to be a standard CABG in the nearly future.