



"Heart's Triumph: Unveiling the 5-Year Journey of Robotic CABG Excellence"

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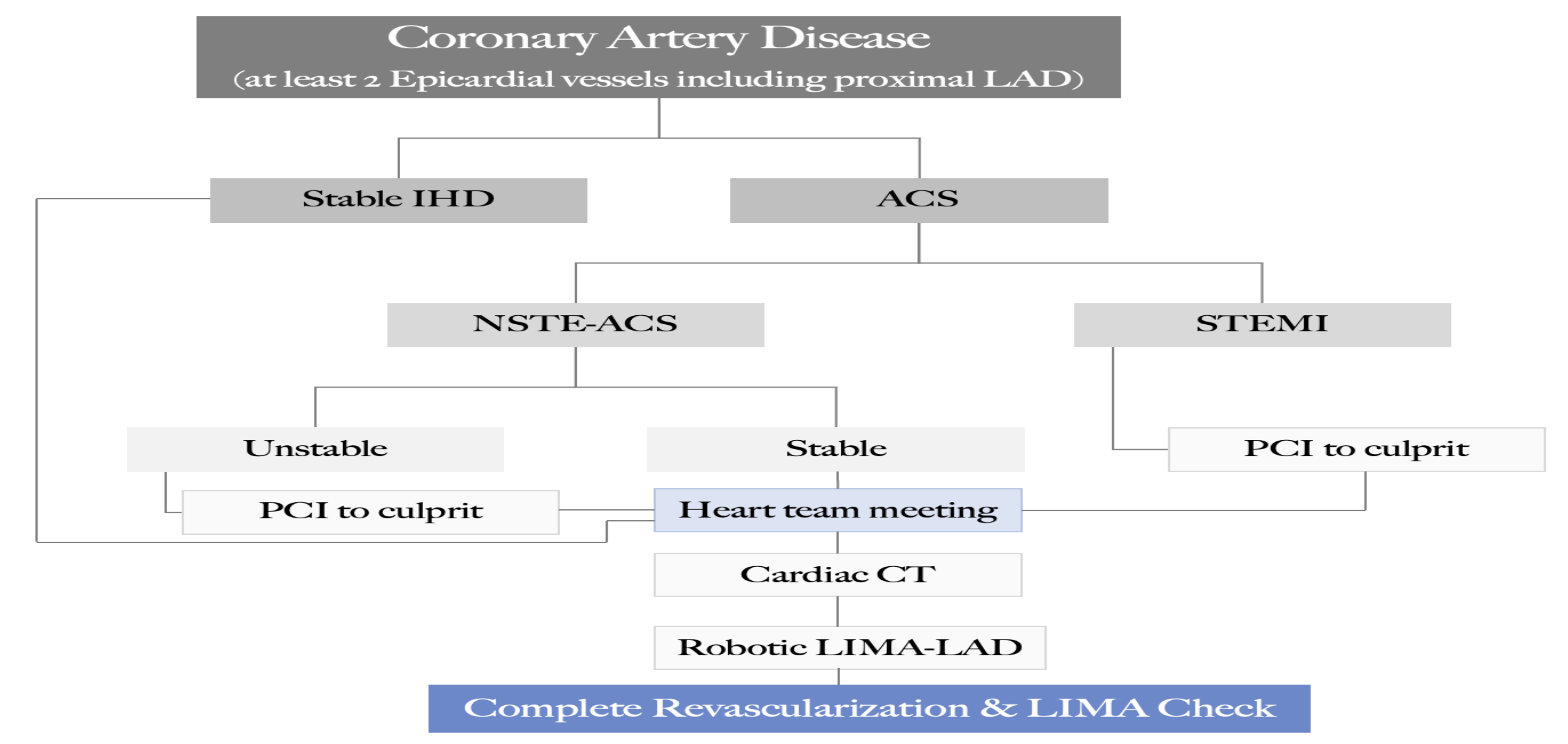
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Background:

- Hybrid coronary revascularization (HCR) is a technique that merges coronary artery bypass grafting surgery and percutaneous coronary intervention (PCI) approaches for the treatment of multivessel coronary artery disease. The surgical component of the procedure is minimally invasive and can be done using robotic technology that avoids the need for sternotomy. Our objective is to evaluate and share our five-years outcome of all patients who underwent robotic-assisted HCR (RHCR).

Methods:

- This study is a retrospective chart review conducted at King Faisal Specialist Hospital and Research Centre in Jeddah (KFSRC-J). The study focuses on patients who underwent RHCR between July 2018 to July 2023.

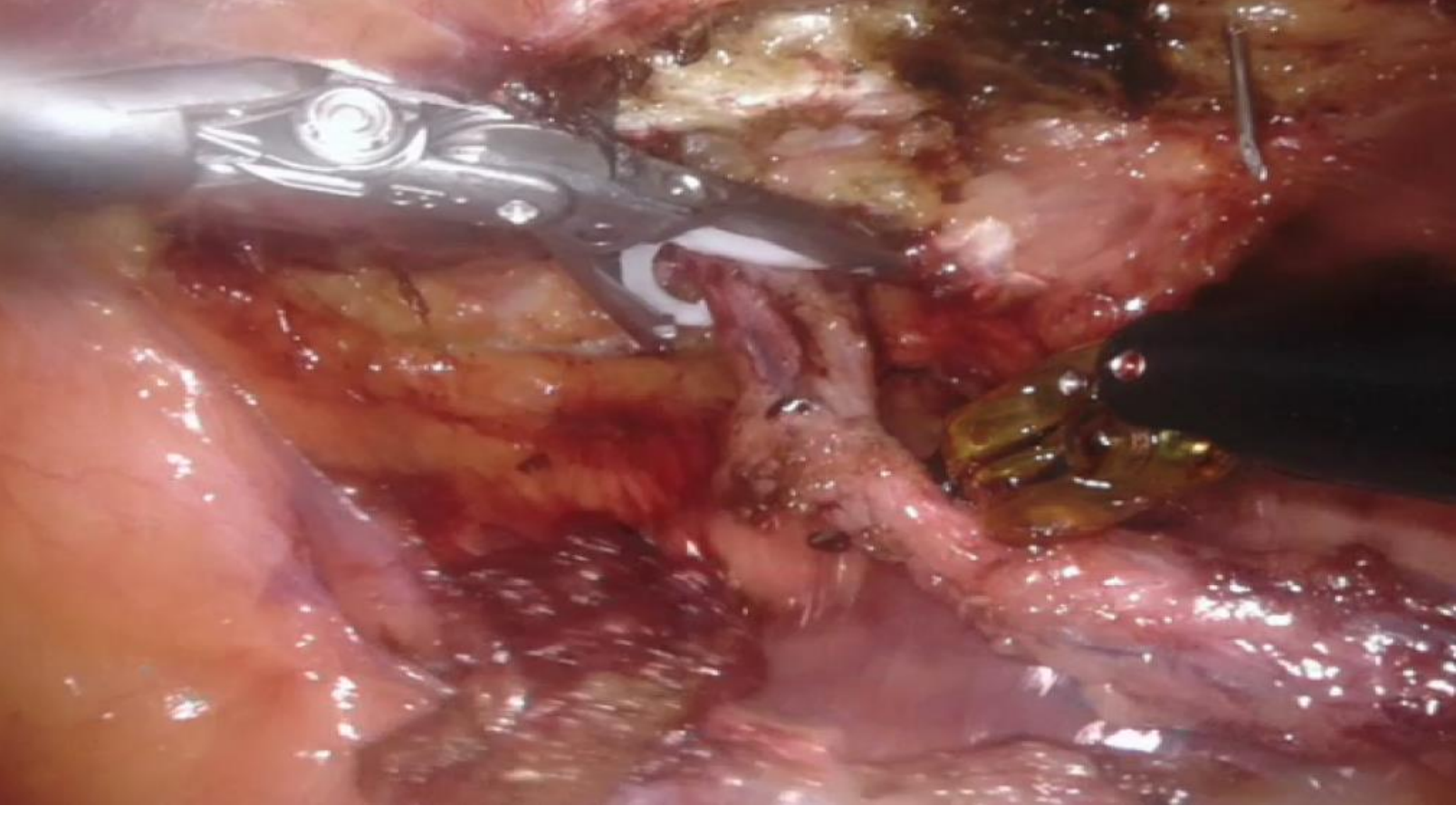


Results:

Patient Profile	Number (261), %
Mean Age	56y
Sex	Male (90%)
Current Smoker	60 %
Hypertension	80%
DM	70%
CKD	15%
PVD	22%
LV Dysfunction:	
Grade 1	53%
Grade 2	23%
Grade 3	15%
Grade 4	9%

Hospital Course	
PCI to RCA	61
PCI to the Circumflex	50
PCI to RCA & Circumflex	140
Drug-eluting stents	All
Average operation time	164 minutes
Converting to conventional	1 patient
Postoperative MACCE	1 patient
Hospital mortality	1 patient
No need for blood transfusion	93%
ICU LOS	1.4 (1-3) +/- 0.6
Mean hospital LOS	5 (3-12) +/- 1.57 days
Re-exploration for bleeding	2 patient
Hemothorax	1 patient
Post op Afib	5 patients

- Robotic-assisted HCR was performed on 261 patients (mean age, 56 years (range, 43-72 years); 89.75% males). Left internal mammary artery grafting was used in all patients. There was no hospital mortality, and the mean hospital and intensive care unit (ICU) stay were 5.8 and 1.4 days, respectively. We found that 93.6% of the patients had no blood transfusion. There were no major adverse cardiac events (MACE) and perioperative MI recorded. There was a 3.8% rate of postoperative complications. The percentage of surgeries converted to conventional and re-exploration for bleeding were 1.2% and 2.6%, respectively. The average operation time was 164 min. During our five years follow up, 94% of the patients were free from angina, 5 patients were admitted for ACS and coronary angiography revealed patent LIMA-LAD , PCI to RCA in 3 patients and PCI to diagonal in 2 patients. Five year survival rate was 99%. No stroke recorded.



Conclusion:

- This study emphasizes on the safety and effectiveness of RHCR in treating patients with multivessel coronary artery disease. Moreover, robotic-assisted hybrid coronary revascularization offers an alternative, functionally complete revascularization option to a selected group of patients with low rate of reintervention rate and MACCE during our five years follow up.

Reference

