

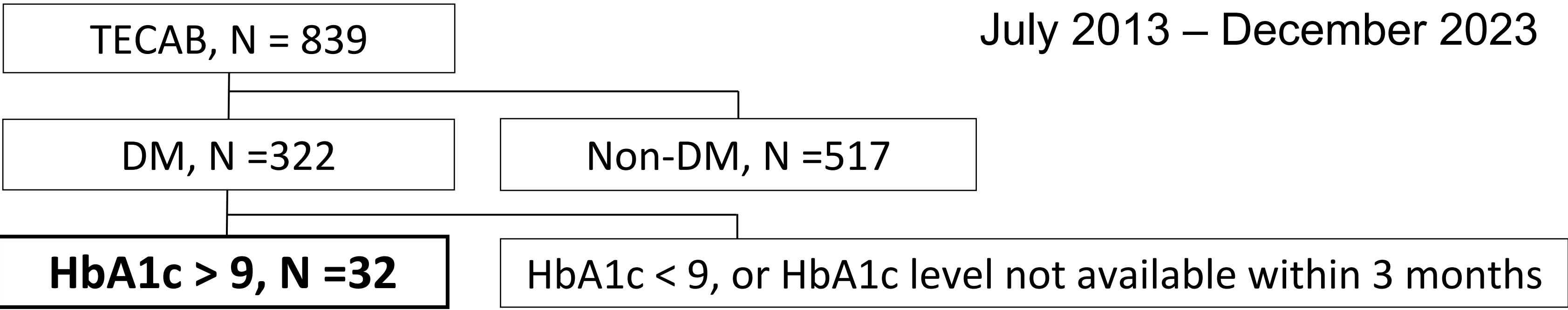
Robotic Totally Endoscopic Coronary Artery Bypass in Uncontrolled Diabetic Patients with High Hemoglobin A1c: What are the outcomes?

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BACKGROUND

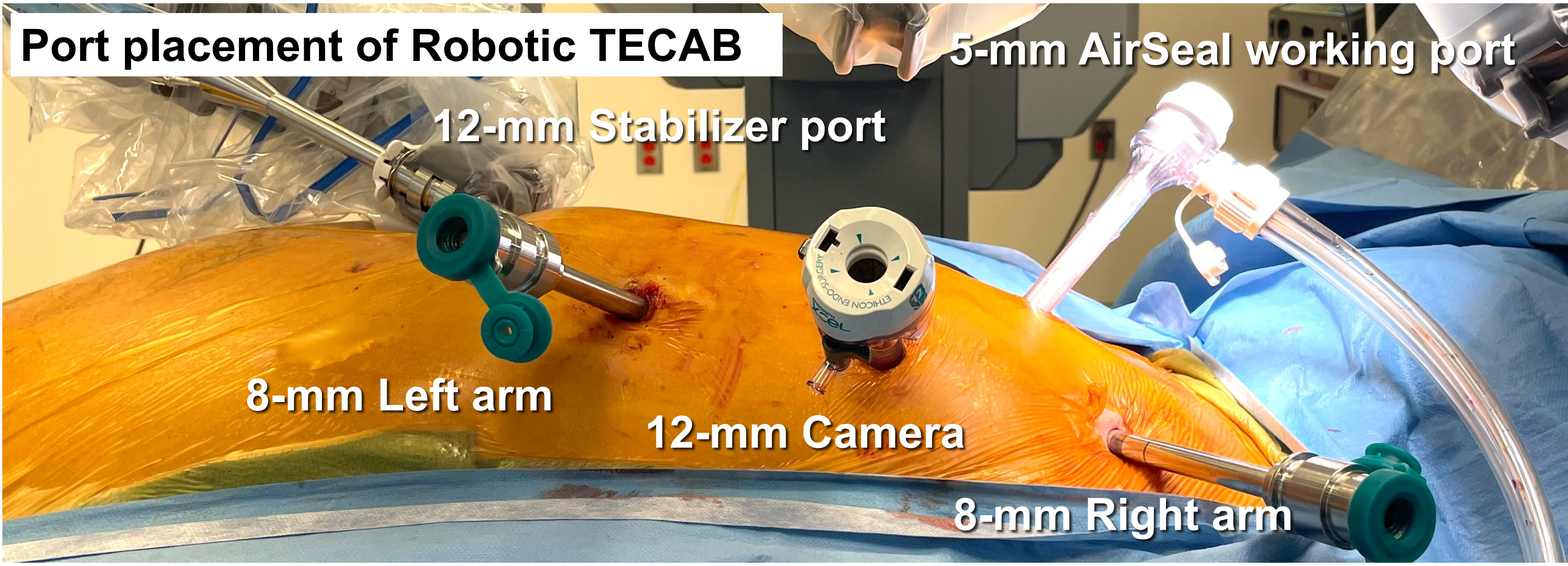
Diabetic patients especially those with high hemoglobin A1C (HbA1C) are at increased risk of morbidity and mortality after coronary artery bypass surgery ¹. Not infrequently surgery is delayed or canceled in these patients due to the increased risk (especially of sternal infection) due to uncontrolled diabetes. We have performed sternal-sparing robotic totally endoscopic coronary artery bypass (TECAB) for all patients regardless of HbA1C value. In this study, we reviewed short-term outcomes of robotic TECAB in patients with high HbA1C.

PATIENTS



32 patients with HbA1c greater than 9 undergoing TECAB were reviewed

SURGICAL TECHNIQUES



Right arm, Camera, Left arm ports in 2nd 4th 6th ICS anterior axillary line
AirSeal working port in 2nd ICS anterior, Stabilizer port in subcostal



ITAs are taken down in skeletonized fashion. End to side anastomosis is made using 7-0 short Pronova suture with double shunts in the coronary artery and the ITA graft.

RESULTS

Baseline Characteristics	HbA1c > 9, N = 32
Age, mean ± SD	61 ± 9.8
Female, n (%)	12 (38)
HbA1c, mean ± SD [min - max]	10.4 ± 1.2 [9 – 13.3]
BMI > 30, n (%)	21 (66)
Chronic kidney disease, n (%)	4 (13)
EF < 40 %, n (%)	7 (22)
Multi-vessel disease, n (%)	25 (78)
STS risk score, mean ± SD	0.9 ± 0.8
Intraoperative Data	HbA1c > 9, N = 32
Two-vessel bypass, n (%)	17 (53)
Three-vessel bypass, n (%)	3 (9)
BIMA use, n (%)	15 (47)
Hybrid procedure, n (%)	10 (31)
Conversion to sternotomy, n (%)	0 (0)
Blood transfusion use, n (%)	1 (3)

Postoperative Outcomes	HbA1c > 9, N = 32
Surgical site infection, n (%)	0 (0)
Pneumonia, n (%)	0 (0)
Acute kidney injury, n (%)	1 (3)
Dialysis, n (%)	0 (0)
Clinical myocardial infarction, n (%)	0 (0)
New atrial fibrillation, n (%)	1 (3)
Stroke or TIA, n (%)	0 (0)
Return to OR for bleeding, n (%)	0 (0)
Length of ICU stay, mean ± SD	1.2 ± 0.7
Length of Hospital stay, mean ± SD	2.6 ± 1.1
30-day mortality, n (%)	0 (0)

CONCLUSIONS

In uncontrolled diabetic patients with extremely high HbA1C, robotic TECAB was safely performed without significant perioperative morbidity or mortality. The liberal use of BITA grafting in this small series accentuates the value of a sternal sparing approach in these patients who are at a significantly higher risk of sternal wound infection.

DISCLOSURES

Husam H Balkhy is a proctor for Intuitive Surgical.

REFERENCES

1. Corazzari C, et al. Impact of preoperative glycometabolic status on outcomes in cardiac surgery: Systematic review and meta-analysis. J Thorac Cardiovasc Surg. Dec;164(6):1950-1960.