

MEETING ABSTRACT

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Non-manipulation of Patent LIMA in the Setting of Reoperative Aortic Valve Replacement in Patients with Previous Coronary Artery Bypass

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Background/Introduction

A patent left internal mammary artery (LIMA) graft challenges the protective effects of cold blood cardioplegia in patients undergoing re-operative aortic valve replacement (AVR).

Aims/Objectives

This study presents the results of our approach to myocardial protection in a series of consecutive patients with previous coronary artery bypass (CAB) undergoing AVR.

Method

Between 2006 and 2014, 72 patients met criteria for inclusion. Out of these 72, 59 had previous CAB and 13 had CAB + AVR. The surgical procedures performed in these series included 50 AVR and 22 AVR + CAB. Myocardial protection was delivered using mild systemic hypothermia and continuous cold blood retrograde and intermittent antegrade cardioplegia, avoiding any manipulation of the LIMA graft. Pre-operative demographics, operative characteristics, in-hospital complications and 30-day mortality were collected according to Society of Thoracic Surgeons (STS) standards.

Results

The cohort was predominately male (89%) and diabetic (58%) with an average age of 74 ± 8.3 . Patients observed improved outcomes compared to STS predicted risk in Mortality (2.7% vs 6.5%), Stroke (1.4% vs 2.6%), Re-operation (6.8% vs 11.2%), Prolonged Ventilation (9.6% vs 21.4%), Renal Failure (1.4% vs 10.0%) Deep Sternal Wound Infection (0.0% vs 0.8%) and Length of

stay >14 days (2.7% vs. 32.5%). More patients had a length of Stay >6 days than Predicted (46.6% vs 21.6%). The STS does not provide a predicted risk for myocardial infarction. The actual rates of complications were lower than expected in five of the provided categories. The 1-, 3-, 5-, and 8-year mortality rates were 4.5% (n = 3/69), 9.8% (n = 5/51), 20.0% (n = 6/30), and 45.5% (n = 5/11) respectively.

Discussion/Conclusion

In this series avoiding the manipulation of a patent LIMA graft was associated with a low morbidity and complication rate, including myocardial infarction, when compared to the predicted STS risk. This has become our preferred approach when performing re-operative surgery on patient with patent LIMA.

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