

# **D-RIBOSE AND “OFF” PUMP CORONARY ARTERY BYPASS AIDS IN CARDIAC INDICES FOLLOWING MYOCARDIAL INFARCTION**

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Patients (pts) presenting with myocardial infarction (MI) may not be considered ideal candidates for immediate revascularization (REV). Elective REV is usually recommended once myocardial instability and dysfunction resolve; if not, an increased mortality and morbidity can be found with early REV. Lower myocardial energy levels may play a role in functional and rhythm abnormalities following MI. Ribose (R), a natural occurring carbohydrate, has shown to enhance recovery of high energy phosphates and improved diastolic function following myocardial ischemia. An “off” pump coronary artery bypass technique (OPCAB) has shown to offer a potential solution to earlier REV. This feasibility trial investigated both OPCAB and R to minimize mortality and morbidity in pts presenting with MI. All pts (n=23) presented with a history of MI. Nine pts underwent REV within 1 week from MI diagnosis, 2 pts between 1 and 3 weeks from MI diagnosis, and 12 pts > 3 weeks from MI diagnosis. Presenting mean ejection fraction was 51.6% (30-65%). Oral R was given to all MI pts, pre- and post-operatively. Cardiac indices were measured pre- and immediately post REV. There were no operative deaths. A significant improvement in cardiac indices was observed: pre-operative mean cardiac index 2.26 L/min/m<sup>2</sup>, post-operative mean cardiac index 2.93 L/min/m<sup>2</sup>, (p<0.001). Ideal timing for REV following MI remains controversial; however, this preliminary trial demonstrated that OPCAB with supplemental R is safe and potentially improves post-operative function following MI. R with OPCAB should be considered in pts presenting with MI for early REV.

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