Effects of BQ-123, an ETA receptor antagonist, on myocardial stunning in isolated rat hearts

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This study was performed to evaluate the effects on mechanical and metabolic function of endogenous endothelin-1 on post-ischaemic myocardial stunning. Isolated rat hearts were given BQ-123 (710 nM) or vehicle alone before being subjected to 20 min of global low flow ischaemia and 60 min reperfusion. Left ventricular mechanical function was assessed as developed and end-diastolic pressure, maximum positive and negative derivatives of pressure and time constant of relaxation. Compared to controls, administration of BQ-123 was associated with a tendency to lower diastolic pressures during ischaemia (23.0 ± 7.0 vs 34.2 ±7.4mmHg) and early reperfusion (15.5 ±3.3 vs 19.8 ±4.4mmHg at 15 min, n = 7/8). However, none of the analysed variables were statistically different between the two groups. BQ-123 does not offer protection against myocardial stunning in isolated rat hearts. However, a tendency to higher ventricular compliance as compared to controls, if confirmed, might be clinically impor