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P55 Remote Ischaemic Preconditioning Reduces Cardiac Biomarkers During Vascular Surgery

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ABSTRACT

Objectives: The primary aim of this study was to evaluate the effects of remote ischaemic preconditioning (RIPC) on preventing the leakage of cardiac damage biomarkers in patients undergoing vascular surgery.

Methods: Randomised, sham-controlled, double-blinded, single-centre study has been carried out. In recruitment patients undergoing open abdominal aortic aneurysm repair, surgical lower limb revascularisation surgery or carotid endarterectomy were enrolled non-consecutively. The RIPC protocol consisting of 4 cycles of 5 minutes of ischaemia, followed by 5 minutes of reperfusion, was applied. A RIPC or a sham procedure was performed noninvasively at the same time as the patient was prepared for anaesthesia. High sensitivity troponin T level was measured preoperatively as well as 2, 8 and 24 hours after surgery and pro b-type natriuretic peptide was measured preoperatively and 24 hours after surgery.

Results: There was significantly higher leakage of high sensitivity troponin T (peak change median 2 ng/L, IQR 0.9–6.2 ng/L vs 0.6 ng/L, IQR 0.7–2.1 ng/L, $p = 0.0002$) and pro b-type natriuretic peptide (change median 144 pg/mL, IQR 17–318 pg/mL vs 51 pg/mL, IQR 12–196 pg/mL, $p = 0.02$) in the sham group compared to the RIPC group.

Conclusion: RIPC reduces the leakage of high sensitivity troponin T and pro b-type natriuretic peptide. Therefore, it may reduce cardiac damage in patients undergoing non-cardiac vascular surgery. The clinical significance of RIPC has to be evaluated in larger studies excluding the factors known to influence its effect.

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