

Ischemic Preconditioning and Coronary Collateral Blood Flow Increment: Two Sides of the Same Coin?

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To the Editor:

We read with great interest the article of Xu Y et al.¹ which was recently published in your journal. The authors of the manuscript observed that remote ischemic preconditioning (RIPC) improved coronary collateral blood flow in patients with coronary heart disease with severe stenosis in one or two vessel. On basis of such finding they argued that RIPC might have a protective effect on coronary collateral circulation. In fact, troponin I levels were significantly lower in RIPC group compared to controls. However, we think there are two relevant remarks to make regarding the protective effect of RIPC. First, previous studies suggested that ischemic preconditioning and collateral recruitment are distinct phenomena, even if both contribute to ischemic tolerance.^{2,3} In particular, Argaud et al. analyzed the protective effect of ischemic preconditioning examining ST segment variation after brief ischemic periods in thirty-six patients who underwent percutaneous transluminal coronary angioplasty.³ Authors took into account the collateral flow through single photon emission chromatography. They found that the protective effect of ischemic preconditioning occurred in absence of change

of collateral perfusion. Secondly, in a recent study Corcoran D et al. provided evidence that RIPC was able to enhance coronary vasodilation through an endothelium-dependent mechanism.⁴ In conclusion, we think that the observation of coronary collateral flow increment after RIPC is an intriguing finding, but further studies are required to understand if it contributes to cardioprotection in any way or it is merely an epiphenomenon associated to RIPC induction.

CONFLICT OF INTEREST

All the authors declare no conflict of interest.

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