Modifications in rat plasma proteome after remote ischemic preconditioning (RIPC) stimulus: identification by a SELDI-TOF-MS approach.

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Modifications in rat plasma proteome after remote ischemic preconditioning (RIPC) stimulus: identification by a SELDI-TOF-MS approach.

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Résumé en anglais
Remote ischemic preconditioning’s (RIPC) ability to render the myocardium resistant to subsequent prolonged ischemia is now clearly established in different species, including humans. Strong evidence suggests that circulating humoral mediators play a key role in signal transduction, but their identities still need to be established. Our study sought to identify potential circulating RIPC mediators using a proteomic approach. Rats were exposed to 10-min limb ischemia followed by 5- (RIPC 5') or 10-min (RIPC 10') reperfusion prior to blood sampling. The control group only underwent blood sampling. Plasma samples were isolated for proteomic analysis using surface-enhanced laser desorption and ionization - time of flight - mass spectrometry (SELDI-TOF-MS). A total of seven proteins, including haptoglobin and transthyretin, were detected as up- or down-regulated in response to RIPC. These proteins had previously been identified as associated with organ protection, anti-inflammation, and various cellular and molecular responses to ischemia. In conclusion, this study indicates that RIPC results in significant modulations of plasma proteome.

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