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Short communication

N-methylnicotinamide failed to induce endothelial prostacyclin release in perfused rat hindquarters

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Abstract:
N-methylnicotinamide, a nicotinamide derivative, possesses anti-thrombotic activity, although the mechanism of its action is unclear. Using a rat model of isolated perfused hindlimb, we tested whether this metabolite of nicotinamide is able to inhibit the vasoconstrictive effects of epinephrine, norepinephrine, and angiotensin II, thereby releasing prostacyclin from the endothelium. We found that N-methylnicotinamide administration by infusion or bolus injection did not change the course of perfusion pressure and did not inhibit the vasoconstrictive action of epinephrine, norepinephrine, or angiotensin II. In contrast, prazosin was able to completely abolish the constriction induced by epinephrine. Moreover, we did not find any changes in the level of a stable prostacyclin analog measured in the collected perfusate samples. Thus, we did not observe any endothelial prostacyclin-releasing properties of N-methylnicotinamide in the perfused rat hindquarters model.

Key words:
N-methylnicotinamide, endothelium, prostacyclin, rat