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Serum Kininase II Activity in Rats with Streptozotocin-induced Diabetes

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Aim. To investigate the serum kininase II activity in rats with streptozotocin-induced diabetes of different duration and the direct effect of streptozotocin and nicotinamide on the serum kininase II activity.
Method. Diabetes was induced in Wistar rats by streptozotocin (75 mg/kg i.p. in a single dose). Serum kininase II activity was determined after 7, 14, 21 and 28 days after the induction, 7 days after i.p. injection of 500 mg/kg nicotinamide and 7 days after i.p. injection of the same combination of nicotinamide and streptozotocin. The serum kininase II activity was determined by the spectrophotometric method, using hippuryl-l-histidyl-l-leucine as a substrate.
Results. Serum kininase II activity was significantly increased in rats with streptozotocin-induced diabetes. Streptozotocin and nicotinamide did not affect the serum kininase II activity by themselves. There were no significant differences in the serum kininase II activity between male and female rats of the control and diabetic groups, respectively.
Conclusion. The increase in serum kininase II activity in streptozotocin-induced diabetes could result from an enhanced release of the enzyme from the vascular endothelium.

Key words: diabetes mellitus, experimental; kininase II; nicotinamide; streptozotocin