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Gette I^{1,2} and Belousova A²**¹Ural Federal University, Russian Federation²Institute of Immunology and Physiology, Russian
Federation**Impact of thiadiazine and aminophthalhydrazide on protection of tissues in type 2 diabetic rats**

A search for medicines having multiple impacts is necessary to attenuate the reason and complications of type 2 diabetes. We have studied 1,3,4-thiadiazine (L-17) and aminophthalhydrazide (APH), which combine antioxidant and antiglycative properties.

The aim of the work is to reveal whether L-17 and APH can contribute to the pancreatic islet, liver and kidney protection in rats with type 2 diabetes mellitus.

Forty male Wistar rats weighing 230-245 g were used in accordance with the ethical principles of the Directive 2010/63/EU. Rats were given intraperitoneal injections of nicotinamide 110 mg / kg and streptozotocin 65 mg / kg to create type 2 diabetes mellitus model. Aqueous solutions of the L-17 (40 mg / kg per day, 12 injections) and APH (2 mg / kg per day, 20 injections) were administered intramuscularly to the diabetic rats. Biochemical, morphometric and immunohistochemical investigations were performed.

Decrease in glucose, glycated hemoglobin and urea levels followed L-17 and APH injections when compared with tests of untreated rats. Treatment with APH, but not L-17, was accompanied by a decrease in aminotransferase activity and the restoration of the beta-cell pool in the islets. Therefore, L-17 and APH attenuates hyperglycemia and kidney damage markers in diabetic rats. APH additionally ameliorates liver and heart damage markers and contributes to the reduction of hyperglycemia by restoring beta-cells. The study was supported by a grant from the Russian Science Foundation 16-15-00039.

Biography

Medvedeva S has completed her PhD at the age of 30 years from Sverdlovsky State Medical Institute. She is the Assistant Professor in Ural Federal University and the Leading Researcher in Institute of Immunology and Physiology in Yekaterinburg, Russian Federation. She has published 147 papers in reputed journals and she is a known specialist morphologist

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