H2 injection aids diabetes outcomes in animal model

May 3 2017

(HealthDay)—Subcutaneous injection of H_2 significantly improves type

2 diabetes mellitus (T2DM)-related outcomes in a mouse model, according to a study published online April 8 in the *Journal of Diabetes Investigation*.

Xiaolong Zhang, from the Second Affiliated Hospital of Wenzhou Medical University in China, and colleagues evaluated whether subcutaneous injection of H_2 (1 mL/mouse/week for four weeks) shows enhanced efficacy against T2DM induced in mice by a high-fat diet and low-dose streptozotocin treatment.

The researchers found that the body weight of H_2-treated mice did not change over the study period. Glucose, insulin, low-density lipoprotein, and triglyceride levels in serum were significantly lower in treated mice versus untreated controls, while high-density lipoprotein cholesterol in the serum was significantly higher. In H_2-treated mice, both glucose tolerance and insulin sensitivity were improved. H_2 treatment also lead to significant reductions in urine volume, urinary total protein and β2 microglobulin, kidney/body weight ratio, and kidney fibrosis, in diabetic nephropathy analysis.

"Subcutaneous injection of H_2 significantly improves T2DM and diabetic nephropathy related outcomes in a mouse model, supporting further consideration of subcutaneous injection as a novel and effective route of clinical H_2 administration," the authors write.

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