Immune intervention reduces beta-cell death in type 1 diabetes

February 26 2013

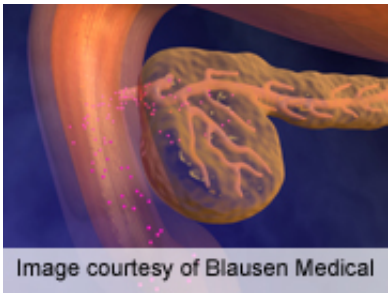
Image courtesy of Blausen Medical

Patients recently diagnosed with type 1 diabetes have greater death of pancreatic β-cells compared with patients with long-standing diabetes, which can be reduced by treatment with teplizumab, according to a study published online Feb. 19 in *Diabetes*.

(HealthDay)—Patients recently diagnosed with type 1 diabetes have greater death of pancreatic β-cells compared with patients with long-standing diabetes, which can be reduced by treatment with teplizumab, according to a study published online Feb. 19 in *Diabetes*.

Jasmin Lebastchi, from the Yale University School of Medicine in New Haven, Conn., and colleagues compared β-cell death in 43 patients recently diagnosed with type 1 diabetes, 31 individuals without diabetes, and 37 patients with type 1 diabetes treated with teplizumab or placebo. β-cell death was determined by measuring relative levels of unmethylated *INS* DNA in serum.

The researchers found that, compared with individuals without diabetes, patients with recent-onset diabetes had higher rates of β-cell death, while patients with long-standing diabetes had lower levels of β-cell death. After treatment of recent-onset diabetes patients with teplizumab, β-cell death was significantly reduced and β-cell function was significantly better preserved.

"Improvement in C-peptide responses with immune intervention is associated with decreased β-cell death," Lebastchi and colleagues write.

Several authors have patent applications for teplizumab and/or the assay of unmethylated insulin DNA and are on the scientific advisory board of Islet Sciences.

More information: Abstract
Full Text (subscription or payment may be required)