Bloomberg

Generic Tuberculosis Medicine Shows Promise for Reversing Type 1 Diabetes

http://www.bloomberg.com/news/2011-06-24/generic-tuberculosis-medicine-shows-promise-for-reversing-type-1-diabetes.html*By Michelle Fay Cortez - Jun 24, 2011 5:21 PM ET Fri Jun 24 21:21:56 GMT 2011*

An 80-year-old drug used to protect people against tuberculosis may help reverse Type 1 diabetes, the most severe form of the disease, in patients who have had it for years, an early study in six patients found.

The medicine killed abnormal white blood cells that interfere with insulin production in the pancreas, according to the study presented at the American Diabetes Association meeting in San Diego. Patients getting two small doses four weeks apart showed signs of restored insulin production for about a week, Denise Faustman, director of the Massachusetts General Hospital Immunobiology Laboratory, said in a telephone interview.

While many researchers are looking for ways to stop Type 1 diabetes in newly diagnosed patients who still produce some insulin naturally, there are few options for people who have had the disease for more than a decade, she said. The findings suggest it may be possible to regenerate the critical pancreatic cells, she said.

“The trial effectively is showing for the first time that the pancreas can turn on briefly after the first wave of killing the bad T cells,” those that attack the insulin producing cells in the pancreas, she said. While scientists may disagree about how the cells are restored, “if you are a long-term diabetic, you probably don’t care. It’s my conclusion that the pancreas has many ways to regenerate,” she said.

Immune System

About 25.8 million people in the U.S. have diabetes, according to the American Diabetes Association. As many as 10 percent have Type 1, where the body’s immune system attacks pancreatic cells that produce insulin, the hormone that enables the body to use sugar for energy. Most diabetics have Type 2, an illness linked to obesity and resistance to insulin.

The drug, known as bacillus Calmette-Guerin or BCG, can boost levels of tumor necrosis factor, an immune modulator that has been shown in laboratory tests to eliminate the damaging white blood cells responsible for diabetes, Faustman said.

The Iacocca Foundation provided funding for the study. A second, larger trial is in development, Faustman said. The goal for the second study is to spark insulin production again, maintain it for a longer period and see how high they can get it, she said.

To contact the reporter on this story: Michelle Fay Cortez in Minneapolis at mcortez@bloomberg.net

To contact the editor responsible for this story: Reg Gale at rgale5@bloomberg.net