

Revolutionary procedure shown to discontinue insulin treatment in type 2 diabetics

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A revolutionary endoscopic therapeutic procedure may lead to the discontinuation of insulin treatment in a significant number of people

with type 2 diabetes, new research presented today at UEG Week 2020 Virtual has shown.

Researchers from the Netherlands tested a novel, minimally invasive ablation procedure that rejuvenates the lining of the duodenum in combination with daily doses of glucose-lowering drugs called glucagon-like peptide agonists (GLP-1 RAs) and mild lifestyle counseling. The study found that 75% of previously [insulin](#)-dependent people with type 2 [diabetes](#) treated with the ablation technique did not need insulin six months later, with HbA1c (a long-term parameter of glucose control) readings of 7.5% or below. HbA1c readings also fell to 6.7% at 12 months.

Patients who responded to the treatment also saw significant reductions in their body mass index (BMI), which was down from an average of 29.8 kg/m² at the beginning of the research to 25.5 kg/m² after 12 months. The percentage of fat in their livers also decreased from 8.1% to 4.6% at six months. Obesity and fatty liver are both important risk factors in the development of metabolic syndrome, a term that encompasses diabetes, high blood pressure (hypertension), obesity, and high triglycerides.

In the non-responder patients, who still needed insulin, the median insulin dose they required fell by more than half (from 35 units per day at study entry to 17 units per day at 12 months).

The minimally invasive technique, called duodenal mucosal resurfacing (DMR), is performed in an outpatient setting and is delivered via an integrated over-the-wire catheter attached to a custom console that performs a synchronized lifting of the duodenal mucosa and then ablation of the treatment area. Although the process is not yet fully understood, mucosal cells are believed to undergo alterations in a response to unhealthy diets that are high in fat and sugar. This leads to

changes in the production and signaling of key hormones that impact insulin resistance and diabetes. Resurfacing the lining appears to rejuvenate and reset this process.

The [pilot study](#), undertaken in 16 patients, was led by Dr. Suzanne Meiring, Dr. Annieke van Baar, and Professor Jacques Bergman from the Amsterdam University Medical Center in the Netherlands.

Dr. Meiring said, "This could be a game-changing approach in the treatment of metabolic syndrome. A single endoscopic DMR ablation with GLP-1 drugs and lifestyle counseling can lead to discontinuation of insulin therapy in a subset of patients with type 2 diabetes, while improving their blood glucose control and overall metabolic health. Many patients with type 2 diabetes are very happy to be able to discontinue insulin therapy, since it comes with weight gain and hypoglycaemic events. Our earlier study, (Revita-1) with patients that used only oral medication for their diabetes type 2, showed that the effect of a single DMR was comparable to adding one glucose lowering drug."

There are about 60 million people in Europe with diabetes and the vast majority (around 90%) of cases are type 2. As well as age and a family history of the condition, [high blood pressure](#) and being overweight are major risk factors for type 2 diabetes.

"Based on the results of this study, a large international randomized controlled trial, called Revita T2Di Pivotal, will soon start to further investigate its effectiveness in greater numbers," added Dr. Meiring.

Provided by Spink Health

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