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The full report is titled “The Effect of Adding Exenatide to a Thiazolidinedione in Suboptimally Controlled Type 2 Diabetes. A Randomized Trial.” It is in the 3 April 2007 issue of *Annals of Internal Medicine* (volume 146, pages 477-485). The authors are B. Zinman, B.J. Hoogwerf, S. Durán García, D.R. Milton, J.M. Giaconia, D.D. Kim, M.E. Trautmann, and R.G. Brodows.

Exenatide Therapy for Type 2 Diabetes

What is the problem and what is known about it so far?

Doctors often prescribe drugs to help patients with type 2 diabetes control their blood sugar. They use a blood test (called hemoglobin A_{1c}) to assess sugar control. In most cases, doctors should aim for optimal control of sugar levels (hemoglobin A_{1c} values less than 7%), depending on several factors. Some patients need more than 1 drug to get their blood sugar levels under optimal control. Drugs that may be used include insulin, alpha-glucosidase inhibitors (acarbose and miglitol), biguanides (metformin), sulfonylureas (glipizide or glyburide), and thiazolidinediones (TZDs, such as rosiglitazone and pioglitazone). Exenatide is a new drug called an incretin mimetic. Few studies have assessed whether adding this drug to TZD treatment improves sugar control.

Why did the researchers do this particular study?

To see whether adding exenatide to TZD treatment improves blood sugar control in adults with type 2 diabetes.

Who was studied?

233 middle-aged adults with suboptimal glucose control despite TZD treatment. The patients' average hemoglobin A_{1c} value was 7.9%.

How was the study done?

The researchers recruited patients from 49 sites in Canada, Spain, and the United States. Patients were randomly assigned to twice-daily injections under the skin of either exenatide or placebo for 16 weeks. All patients were taking TZD pills, and some also took metformin pills. The researchers tested patients' blood for glucose levels, weighed patients, and asked patients about side effects. The researchers, doctors, and patients did not know who got exenatide or placebo.

What did the researchers find?

Exenatide reduced hemoglobin A_{1c} levels by about 0.98% and body weight by about 3 pounds more than placebo. More patients who received exenatide than patients who received placebo had nausea (40% vs. 15%) or vomiting (13% vs. 1%).

What were the limitations of the study?

Treatment duration was only 16 weeks, and 29% of patients in the exenatide group and 14% of patients in the placebo group did not complete the study. Only patients who tolerated placebo injections during a 2-week “run-in” period were studied.

What are the implications of the study?

Adding exenatide to TZD treatment improves blood sugar control and reduces body weight by small amounts and also causes some nausea and vomiting.

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