Epidural Steroid Shots Up Diabetics’ Blood Sugars

**By Fran Lowry**

**Orlando, Fla.—** Glucocorticosteroids that are epidurally administered can transiently increase in fasting blood glucose levels in patients with diabetes, according to a study presented at the annual meeting of the American Academy of Pain Medicine.

In a trial of 40 patients, fasting blood glucose levels rose significantly—about 30% above baseline—the first morning after the epidural and stayed elevated for an average of 7 days in one subset of patients, said Dr. Adam Stoller of Beth Israel Deaconess Medical Center, Boston.

“It’s important to know that there is this potential for bad outcomes, especially since epidural steroid injections are the most common pain clinic procedure and there is an increasing number of diabetics,” Dr. Stoller said in an interview. He and his associates at Beth Israel Deaconess were prompted to study the effect of epidural steroid injections on blood sugar after a diabetic patient went into a ketoacidosis coma following the procedure.

The patients were randomized to receive epidural administration of 40 mg or 80 mg of methylprednisolone acetate (Depo-Medrol). Hemoglobin A1c (HbA1c) levels were drawn on the day of the epidural, and baseline blood sugars were obtained from the patients’ glucose log, or from a glucose meter. Fasting blood sugars were monitored for 2 weeks after the epidural. Fasting blood glucose levels were increased by 30% above baseline in 7 days in the patients who received the 80-mg dose of Depo-Medrol and for an average of 2 days in those on the 40-mg dose.

The magnitude of the rise in blood sugar was correlated with HbA1c levels at the time of the injection, Dr. Stoller said. “The higher the hemoglobin A1c, the greater the derangement in fasting blood glucose. Hemoglobin A1c of 7% or greater predicted a more significant increase in blood glucose.”

Baseline fasting blood sugars did not correlate with the subsequent rise that occurred after the epidural steroids, which surprised the investigators.

“We often use fasting blood sugar as an indication of whether or should not give epidural steroids. In this study, we found fasting sugars had no correlation with their rise after the epidural steroids would be. The thing that most correlated with a rise in blood sugar was the HbA1c levels and in that area the patients were responsive,” Dr. Stoller said.

**Unanswered Questions, Lack of Data Complicate Incretin Therapy**

**By Miriam E. Tucker**

**San Francisco** — The new incretin mimetic exenatide and the incretin enhancer sitagliptin might be substantially better than metformin or thiazolidinedione for patients who have type 2 diabetes.

Dr. Buse has received research funds from Amylin Pharmaceuticals and from Eli Lilly & Co., which market exenatide. He is an adviser and speaker for those companies and for Merck & Co., which markets sitagliptin.

Incretin augments glucose-stimulated insulin secretion by intrinsically derived peptides. Exenatide and sitagliptin augment the incretin pathway, which appears to be attenuated in type 2 diabetes. The incretin effect is composed mainly of what they call “autocrine activity” of a cell and levels that started at 7 were linked to the greatest rise.” Dr. Stoller said he had no conflicts of interest to report.

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