Insulin Injection Refresher Improves HbA_{1c} Levels

BY TIMOTHY F. KIRN Sacramento Bureau

CHICAGO — Many patients with diabetes probably could benefit from a refresher course in how to inject insulin properly, according to a report presented at the annual scientific sessions of the American Diabetes Association.

In a trial of an education program for diabetes patients, 87 adult patients who had been using insulin for at least 3 years were evaluated and then retaught how to inject, based on what they did not seem to know. The mean hemoglobin A_{1c} (HbA_{1c}) level in the group dropped from 6.94% at baseline to 6.28% at 4 months after the new training.

The trial showed that more than half of these highly experienced patients had a "poor" or only "moderate" understanding

Gestational **Diabetes May** Be Declining

CHICAGO — A review of births at a large health maintenance organization suggests the incidence of gestational diabetes is declining, but it is being offset by an increase in pre-existing diabetes.

'Gestational diabetes mellitus [GDM] appears to have declined about 15% within our study period but ... we saw a doubling of pre-existing diabetes in the study," Jean M. Lawrence, Sc.D., said at the annual scientific sessions of the American Diabetes Association. "We don't know whether this is an increase in the prevalence of diabetes or an increase in screening and diagnosis of previously undiagnosed diabetes. Overall, we saw little change in the proportion of pregnancies with the mother and fetus exposed to diabetes during the pregnancy.'

Dr. Lawrence, an epidemiologist in the department of research and evaluation at Kaiser Permanente Southern California, Pasadena, and colleagues looked at all of the births at 11 Kaiser Permanente hospitals in Southern California from 1999 to 2005, with a total of 209,532 deliveries of infants who were at 20 weeks' gestation or later.

Overall, 8% of the births were to mothers with diabetes, either gestational or preexisting, in each of the years reviewed, with a peak of almost 9% in 2000, and a slight decline totaling less than 1% since then.

The annual prevalence of GDM also peaked in 2000, at the rate of 7.01 cases per 100 women delivered. After that it declined steadily, to a rate of 6.32 cases per 100 women delivered in 2005. At the same time, the annual prevalence of pre-existing diabetes increased steadily from a rate of 1.08 cases per 100 in 1999 to a rate of 2.80 per 100 in 2005.

After adjustment for maternal age and race/ethnicity, GDM declined during the study period at an average annual rate of 4%, whereas pre-existing diabetes in-

creased by an average of 15% annually.

of how best to treat their insulin and give themselves their injections, said Dr. Mihoko Matsumura, of the department of endocrinology and metabolism at Dokkyo University, Tochigi, Japan. At the outset of the trial, patients were given a detailed test that included questions about how they stored their insulin, at what temperature they stored it, and whether they used the same injection site repeatedly.

The test results were then scored and grouped according to whether the patients had poor, moderate, or good understanding. After the test, all patients were given an explanation sheet, which included the correct answers. They also received a 10-minute review of their test with a physician.

Only 28 of the 87 patients were found to have "good" understanding on the test, defined as answering more than half the questions correctly. Another 38 had "moderate" understanding, defined as answering about half the questions correctly. And 21 had "poor" understanding, getting fewer than half the answers correct. One of the most common problems the patients had was that they tended to inject repeatedly in the same location, Dr. Matsumura said.

The patients with the poorest understanding had the most improvement in HbA_{1c} level at 4 months, dropping from a mean of 7.03% before the test to 6.26% after, she noted. "These findings suggest that repeated instruction for insulin injection improves glycemic control, especially in patients with poorer understanding."



Important Safety Information

- AMITIZA is indicated for the treatment of chronic idiopathic constipation in the adult population.
- . AMITIZA should not be used in patients with a known hypersensitivity to any components of the formulation and in patients with a history of mechanical gastrointestinal obstruction. Patients with symptoms suggestive of mechanical gastrointestinal obstruction should be evaluated prior to initiating AMITIZA treatment.
- The safety of AMITIZA in pregnancy has not been evaluated in humans. In guinea pigs, lubiprostone has been shown to have the potential to cause fetal loss. AMITIZA should be used during pregnancy only if the benefit justifies the potential risk to the fetus. Women who could become pregnant should have a negative pregnancy test prior to beginning therapy with AMITIZA and should be capable of complying with effective contraceptive measures.
- AMITIZA should not be administered to patients that have severe diarrhea. Patients should be aware of the
 possible occurrence of diarrhea during treatment. If the diarrhea becomes severe, patients should consult their health professional.
- In clinical trials, the most common adverse event was nausea (31%). Other adverse events (≥5% of patients) included diarrhea (13%), headache (13%), abdominal distention (7%), abdominal pain (7%), flatulence (6%), sinusitis (5%) and vomiting (5%).

Relief is defined as ≥3 spontaneous bowel movements (SBMs) per week.

Please see Brief Summary of Prescribing Information on adjacent page.

*57%-63% of patients had a first SBM within 24 hours.

†In 4-week clinical trials. ‡Demonstrated in 6-month and 12-month safety studies.

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