Adolescents Omitting Insulin for Weight Control

BY MIRIAM E. TUCKER  
Senior Writer

AMSTERDAM — More than 90% of all teenagers with type 1 diabetes omit insulin doses at least occasionally in order to prevent weight gain, according to the results of an international observational study presented by the Novo Nordisk—funded Hvidore Study Group. Respondents were from 21 centers in Europe, Australia, Japan, and North America. There was one U.S. center at Children’s Hospital, Los Angeles.

The study group was 49.4% female and 50.6% male. Both genders had a mean age of 14.5 years, and mean diabetes duration of 6.3 years for the females and 5.9 years for the males. Mean body mass index values were 22.8 kg/m² for the females and 21.7 kg/m² for the males, and mean HbA₁c levels were 8.3% for the females and 8.1% for the males.

Each adolescent was asked to complete an extensive questionnaire covering topics such as self-management and health behaviors, treatment goals, family dynamics, and eating behaviors, including weight-related concerns, dieting activities, and weight-reducing actions. The study group aimed to determine the frequency of insulin omission for weight control, and to characterize the participants according to their insulin omission practices.

Out of the 1,437 adolescents ages 11-18 years with type 1 diabetes of at least 1 year’s duration completed the survey, conducted in 2005 by the Novo Nordisk—funded Hvidore Study Group. Respondents were from 21 centers in Europe, Australia, Japan, and North America. There was one U.S. center at Children’s Hospital, Los Angeles.

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Possible responses were “never,” “once a month,” “once a week,” or “every day.” The majority—91.7% of the females and 93.0% of the males—checked “once a month.” “Never” was a distant second, reported by 5.1% of females and 4.2% of males, followed by “once a week” (2.5% female/1.9% male) and “every day” (0.7% female/0.9% male).

“This was not just in general, but specifically to avoid weight gain. Clearly, people are connecting the two aspects,” Dr. Skovlund commented.

The nearly equal proportion of males and females is striking. “A lot of the insulin omission literature has focused on this because a female phenomenon. . . . But we have certainly also seen it in boys,” he said.

Not surprisingly, those who reported omitting insulin doses either daily or weekly (“high omitters”) had poorer metabolic control, and averaged a significant difference of half a percentage point in hemoglobin A₁c values, compared with the “low omitters,” those who omitted never or monthly (8.99% female/8.61% male vs. 8.24% female/8.08% male).

Insulin omission remained significantly correlated with HbA₁c after controlling for age and diabetes duration, but not gender.

Insulin omission also was highly correlated with other weight-loss behaviors, such as fasting, vomiting, and use of diet pills/laxatives, as well as reduced well-being. Insulin omission was reported both by patients on multiple daily injections as well as those on insulin pumps (who made up about 20% of the overall group).

The findings are not all that surprising to pediatric endocrinologist Dr. Francine R. Kaufman, who heads the Los Angeles center: “Kids miss doses all the time. . . . The question is why.”

Her adolescent patient population with type 1 diabetes tends to be well educated and aware that insulin omission can control weight via glycosuria. In fact, in the United States the practice of omitting insulin by young people with type 1 diabetes in order to control weight has been dubbed “Diabulemia” and is currently a hot topic in the lay press, she noted in an interview.

But the thought process may not always be so straightforward. Rather, teens might rationalize to themselves that perhaps they didn’t eat as much as they did, or that they don’t need as much insulin as they actually do. “A lot of it is not totally willful, but kind of miscalculating the dose,” she remarked.

RAS Blockers Reduce Renal Events in Kidney Disease

BY PATRICE WENDLING  
Chicago Bureau

CHICAGO — Routine use of renin angiotensin system blockers is indicated in patients with chronic kidney disease as part of a strategy to reduce cardiovascular and renal events, Dr. Matthew Weir said at the annual meeting of the American Society of Hypertension.

Patients with chronic kidney disease benefit as much as, if not more than, the general population benefits from the antihypertensive and antiproteinuric effects of renin angiotensin system (RAS) blockade because they are at increased risk for cardiovascular disease outcomes and all-cause mortality.

Growing evidence, including a well-designed trial from China (N. Engl. J. Med. 2006;354:131-40), also suggests that the extent of their participation in the activity.

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