

How to Distinguish Depression and Diabulimia

BY BRUCE JANCIN

EXPERT ANALYSIS FROM A CONFERENCE ON THE MANAGEMENT OF DIABETES IN YOUTH

KEYSTONE, COLO. – Two common comorbidities in type 1 diabetic adolescents are depression and the eating disorder popularly known as diabulimia. Both feature high and upwardly trending hemoglobin A_{1c} levels, often accompanied by weight loss. But a couple of simple questions can help a clinician readily distinguish between the two.

These questions probe for distortions in body image and eating behavior, two core features of bulimia as described in the DSM-IV. These also are central to diabulimia, but diabulimia isn't a DSM-IV diagnosis and thus does not have formal diagnostic criteria, Grace Shih explained at the conference, sponsored by the University of Colorado, Denver, and the Children's Diabetes Foundation at Denver.

A couple of years ago, international experts met in Minneapolis and declared the preferred term for diabulimia is "eating disorder in diabetes mellitus type 1," abbreviated ED-DMT1. However, "diabulimia" has caught on with patients, families, and the mass media, and Ms. Shih generally stuck with that term in her presentation. Also, because the male:female ratio in diabulimia is 1:10, the same as in patients with DSM-IV eating disorders, Ms. Shih often used "she" in referring to diabulimic teens.

The first question to ask a type 1 diabetic adolescent to learn whether she has a distorted body image is, "How much do you weigh?" The clinician already knows the answer, of course: It's right there in the front of the chart. The question's real purpose is to gain insight into the patient's perception of her weight.

A depressed diabetic teen will often answer, "I don't know my weight, and I don't care." In contrast, diabulimic pa-

tients weigh themselves often. Very often. They may take issue with the accuracy of the clinic scale, according to Ms. Shih, a registered dietician at Packard Children's Hospital at Stanford (Calif.) Medical Center with a practice consisting primarily of type 1 diabetic children and adolescents with eating disorders.

The second question to ask is, "What do you think you should weigh?" The depressed patient may answer, "I don't know – whatever." But not so with the patient with diabulimia.

"The patients with eating disorders will always say something less than their current weight. They could be thin as a rail, but they see themselves as fat," she continued.

Diabulimic teens also are somewhat obsessive and compulsive about their eating behavior. They restrict fats and sweets, go on frequent diets, and often feel guilty after eating. And they're exceptionally good at calorie counting. Ask a simple question like, "How many calories are there in an apple?" and the response might be, "How big is the diameter of the apple?"

Depressed diabetic teens, on the other hand, will often eat anything, but in very small quantities. "A bite of chips, a bite of hamburger, a bite of chocolate – that's how they eat," Ms. Shih said.

Roughly 25% of adolescents with type 1 diabetes have comorbid depression. The prevalence of ED-DMT1 is 11%-30%, depending on the study.

Diabulimia has serious health consequences. Japanese investigators reported that a cohort of type 1 diabetic patients took an average of 11.5 and 15.9 years to develop simple and advanced retinopathy, compared with 3.4 and 7.6 years, respectively, in diabulimic patients. Time to diagnosis of nephropathy averaged 15.1 years in type 1 diabetic patients without diabulimia vs. 6.6 years in those with the eating disorder.

"It's scary, isn't it? But don't try to use this information to scare the teenagers. I've tried. It didn't work," she said. "Inside a teenager's mind, it's as easy as 1+1=2. Insulin equals weight gain, therefore insulin shots equal fat shots. And no insulin equals weight loss."

Clinicians with a special interest in ED-DMT1 have adapted the DSM-IV



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MS. SHIH

criteria for bulimia, which center on binge eating and "inappropriate compensatory behavior" on at least two occasions per week for 3 months. This compensatory behavior might be purging, misuse of laxatives, or excessive exercise, but in diabulimic patients it takes the form of a greater than 25% reduction in insulin dose for more than 3 months for the purpose of weight loss.

If a patient's blood glucose is in excess of 250 mg/dL, the weight loss can be significant, since the renal threshold for glucose is 160-180 mg/dL.

Ms. Shih cautioned that teens often cheat on their blood glucose records to hide the fact that they're not taking insulin. They may provide recordings of dilute orange juice or dog's blood, but the most common way to cheat is to poke a finger and take a blood sample while running the finger under the faucet.

"This is not a group of bad kids," she stressed. "This is a group of very smart kids. They are just too smart for their own good."

Once a clinician suspects a patient has diabulimia, it's time to get skilled professional help from a team consisting of

an endocrinologist or nurse practitioner, a dietician experienced in treating patients with eating disorders, and a psychotherapist skilled in treating diabulimic patients.

Finding such a team can be difficult. Ms. Shih has three private practice clinics throughout the San Francisco Bay Area, so she knows most local psychotherapists. Many are comfortable treating eating disorders. Few are comfortable in situations where type 1 diabetes is integral to the psychopathology. Exactly the opposite is true among dietitians: Many are highly skilled at diabetes management but don't have the passion or background to take on youths with comorbid eating disorders.

On her Web site (www.gracenutrition.org), Ms. Shih is compiling a list of practitioners who treat diabulimia. She is eager to receive more recommendations for additions to the list.

Her own treatment approach involves taking the time to get to know the diabulimic patient and figuring out that individual's potential motivator for change. To the young person who is an academic overachiever eager to get into a top university, Ms. Shih might point out that taking her insulin as directed would bring more energy, a better attention span, fewer headaches – and better grades. For the athlete, the appeal might be the prospect of loss of lean body mass because of uncontrolled diabetes.

To the patient with blurred vision caused by swelling of the lens because of osmotic changes induced by very high blood glucose levels, it might be the argument that her eyesight changes, unlike retinopathy, are reversible with improved diabetes control.

"Most of these patients don't take insulin at all, so set small goals and start slow," the dietician advised.

Ms. Shih disclosed having no conflicts of interest. ■

Regular Bedtimes Linked to Better Developmental Outcomes

BY BRUCE JANCIN

FROM THE ANNUAL MEETING OF THE ASSOCIATED PROFESSIONAL SLEEP SOCIETIES

SAN ANTONIO – Parental emphasis on a consistent bedtime emerged as the strongest predictor of favorable developmental outcomes at 4 years of age in an 8,000-child study.

"Getting parents to set bedtime routines can be an important way to make a significant impact on children's emergent literacy and language skills. Pediatricians can easily promote regular bedtimes with parents and children, behaviors which in turn lead to healthy sleep," Erika E. Gaylor, Ph.D., said at the meeting.

Preschoolers who averaged fewer than the 11-12 hours of total sleep per 24-hour cycle, recommended in guidelines by the American Academy of Sleep Medicine and other major groups, had significantly lower test scores on language, early math, and literacy skills, reported Dr. Gaylor, an early childhood researcher at SRI International, an independent, non-profit research and development organization based in Menlo Park, Calif.

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Major Finding: Earlier bedtime predicted significantly higher scores at age 4 years on receptive language, literacy, phonologic awareness, and early math, but not expressive language.

Data Source: An analysis of 8,000 children from the landmark Department of Education-sponsored Early Childhood Longitudinal Study-Birth Cohort.

Disclosures: Dr. Gaylor reported having no financial conflicts in connection with the study.

Of note, the average nighttime sleep duration of the preschoolers included in this analysis from the landmark Department of Education-sponsored Early Childhood Longitudinal Study-Birth Cohort was 10.5 hours. And since other studies have shown only one-quarter of 4-year-olds still take a daytime nap, that means most U.S. preschoolers are getting 1-2 fewer hours of sleep per 24 hours than recommended.

The analysis was based on a nationally representative sample comprising 8,000 children who underwent standardized, structured assessments of cognition, atten-

tion, and emotional development at age 4 years, along with parental phone interviews conducted when the children were aged 9 months and again at 4 years.

Among the key findings:

- ▶ Three-quarters of children went to bed between 8 and 10 p.m., 22% had a bedtime of 10 p.m. or later, and 3% regularly hit the sack before 8 p.m.
- ▶ Sixty percent of children woke up between 7 and 9 a.m. Thirty-two percent regularly awakened before 7 a.m.
- ▶ Children from higher socioeconomic status households went to bed significantly earlier and were 36% more likely to have a rule about bedtime.
- ▶ African American children went to bed an average of a quarter hour later than did white children and slept significantly less during the night.
- ▶ Earlier bedtime predicted significantly higher scores at age 4 years on receptive language, literacy, phonologic awareness, and early math, but not expressive language.

Dr. Gaylor noted that this is the largest study of its kind. Its chief limitation was that it relied on parental reports of children's sleep duration, she said. ■