

Three Controversies, Many Answers

Preface

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Controversy is defined in *Webster's Collegiate Dictionary* as "a disagreement on a contentious topic, strongly felt or expressed by all those concerned." Even when a position on a significant issue has reached a level of consensus that most professionals can accept, uncertainty may remain regarding implementation. Exploring these uncertainties or controversies gives us an opportunity to illuminate the facets of a topic that will most likely lead to better patient care. Said succinctly, the "devil is in the details."

We began planning this From Research to Practice section with a long list of current controversies in the care of people with diabetes. After much discussion, we whittled our list down to the three issues that we believe most affect diabetes care providers: 1) how best to diagnose diabetes and measure blood glucose control, 2) how best to match insulin therapy to our patients' individual needs, and 3) how best to decide which children, if any, should be candidates for insulin pump therapy.

How Do We Diagnose Diabetes and Measure Blood Glucose Control?

We begin our section with a look at the continuing controversy surrounding the diagnosis of diabetes and blood glucose measurement. First, Mayer B. Davidson, MD, a past president of the American Diabetes Association (ADA) and member of its Expert Committee on the Diagnosis and Classification of Diabetes Mellitus, provides an alternative view from the current committee report on diagnosis and classification of diabetes mellitus (p. 67).

Recognizing that diabetes care teams regularly encounter patients who do not quite fit the criteria for diagnosis, but who we know are at risk, Dr. Davidson describes a thought-provoking approach to diag-

nosing these patients. He notes that, whereas there is evidence of increased risk for coronary artery disease in patients with increased glucose levels even down to the highest quartile of normal fasting plasma glucose, there is no evidence that improving glycemic control will affect morbidity and mortality.

The ADA's Expert Committee faced the daunting challenge of establishing a point at which at-risk patients are identified appropriately. It has been our observation that patients who are newly diagnosed with diabetes are often very interested in learning about diabetes management. Diagnosis is an important time in their "diabetic life," and appropriate self-management education, attitudes, and subsequent lifestyle habits can be instilled at this formative time.

It is therefore important for all members of the health care team to be in agreement about their patients' diagnosis and goals for control. Ambiguity or disagreement among members of the team often results in confusion for patients, who may then discount all advice. We hope that diabetes team members from all disciplines will consider these issues and reach consensus regarding an approach to diagnosis and goals for control.

Within this same overarching topic, we are also pleased to be reprinting here the report from the recent ADA Consensus Development Conference on Postprandial Blood Glucose (p. 71). Participants in the consensus conference reached agreement that postprandial measurement should occur 2 h after the beginning of a meal. Conferees identified three clinical situations in which postprandial monitoring could be considered: 1) suspected postprandial hyperglycemia, 2) evaluating treatment specifically aimed at lowering post-

prandial glucose levels, and 3) hypoglycemia. The conference also posed a number of questions that should be addressed in further research, including “What is the clinical utility of using measurements of postprandial blood glucose to improve glycemic control?”

We propose that a primary learning value of the postprandial glucose test as biofeedback for patients cannot be ignored but may be difficult to demonstrate in research trials. Many patients get a deeper understanding of the carbohydrate density of different foods by seeing their postprandial elevations in glucose after eating these foods.

Individual practitioners and diabetes care teams will need to reach their own consensus regarding the appropriate blood glucose goal for the 2-h test. This will probably need to be developed individually based on patients’ treatment, goals for control, and risk for hypoglycemia.

We are beginning to see current research identify the contribution of postprandial blood glucose to achievement of overall glycemic goals, its role in complication development, and appropriate goals for its control. Meanwhile, postprandial blood glucose measurement remains an important tool for empowering patients to adjust food and medications to achieve blood glucose control.

Fine-Tuning Control: Pattern Management Versus Supplementation

Our second controversy centers on how to best manage the day-to-day challenge of estimating (or not) carbohydrate intake and then delivering appropriately matched insulin therapy. First, Jan Pearson, BAN, RN, CDE, and Richard Bergental, MD,

offer their perspective on utilizing pattern management to achieve optimal control (p. 75). Then, Irl B. Hirsch, MD, and Ruth Farkas-Hirsch, MS, RN, CDE, take a slightly different tact, using what they call “supplementation” for short-term glycemic corrections and “adjustments” to correct longer-term patterns of hypo- or hyperglycemia (p. 79).

Both sets of authors argue against traditional “sliding scales,” and both address the issue of whether pattern management has become outdated now that more patients are using multiple-dose insulin therapy or insulin pumps. In these two articles, then, we find not so much a “pro-and-con” discussion, but rather excellent descriptions of two innovative ways to achieve glycemic control. Most practitioners will find both methods equally effective and will likely use a combination of methods to achieve improved control in individual patients.

Pump Therapy for Children: Weighing the Risks and Benefits

Our third and final controversy explores issues of importance when considering using continuous subcutaneous insulin infusion in children. Pump therapy has proven to be an effective tool in diabetes management for adults, but for young children, it presents unique issues and poses unique problems. Georgeanna J. Klingensmith, MD, and her colleagues (p. 81) and Francine Ratner Kaufman, MD, and her colleagues (p. 84) share their significant experience with pump therapy in children and enumerate many issues to be explored when considering initiating this type of therapy.

Dr. Klingensmith and colleagues point out that, even after training in pump use and initiation, it is not the children on pump therapy, but rather their parents or caregivers who are the actual pump “users.” They note that even children in the 12- to 14-year-old group, who may be able to calculate meal doses, may forget to take their premeal bolus and thus require continued parental involvement in their diabetes regimen.

Dr. Kaufman and her colleagues present a step-by-step approach to initiating pump therapy in children that will serve as a useful guide for practitioners. They share their experience with pump therapy at Childrens Hospital of Los Angeles and describe some alternative approaches, such as nighttime-only pumps for children.

Both sets of authors outline many factors to be considered when determining whether a particular child might be a candidate for pump therapy, and both sets of authors present cautions regarding pump use at school.

We found the information in both articles to be very practical and useful. Taking the pertinent points from each, we have developed a patient information tear-out page (p. 90) for practitioners to share with parents who are considering pump therapy for a child.

There are almost always two sides to every story, and frequently there are even more. After reading these articles exploring different points of view on three current controversies, we hope you will have gained a fresh perspective on some of the more perplexing questions facing those who provide clinical care for people with diabetes.