Diabetes: a special issue

Merri Pendergrass

When I first became interested in diabetes, clinical diabetes was commonly considered to be a bore. The most challenging decision a clinician faced seemed to be whether or not to switch a patient from a sulfonylurea to insulin. Around 1990, the pace of diabetes research started to pick up, and has increased steadily since then. The epidemic of diabetes is now widely recognized. Landmark trials have demonstrated that type 2 diabetes is potentially preventable with medications, as well as lifestyle modification. Clinical trials have also shown that once diabetes has developed, good glycemic, blood pressure, and lipid control will reduce complications. Multiple new classes of medications for diabetes treatment have become available, and additional classes will probably become available soon. In addition to medical therapies, our understanding of the role of bariatric surgery has increased and improvements have been made in pancreas and islet cell transplantation. Insulin delivery systems and devices that monitor blood glucose are constantly being improved. Looking towards the future, research with stem cells and xenotransplantation evokes the dream that curative therapy eventually might become available for many patients with diabetes.

As a result of the dramatic advances in diabetes research, clinical decisions faced by diabetes health care providers have become tremendously complex. Today's approaches must focus not only on treatment of hyperglycemia, but also on identification of individuals at increased risk for diabetes, initiation of interventions to prevent the onset of disease, performance of optimal surveillance for diabetes complications, determination of the best combinations of therapies to treat hyperglycemia and provision of treatment that specifically aims to reduce the burden of existing diabetes complications. Given the complexity of these goals, endocrinologists are increasingly being asked to participate in the care of diabetic patients.

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Diabetes management is now commonly considered many things—challenging, overwhelming, demanding, frustrating—but certainly not boring!

In acknowledgment of the escalating magnitude of research in this area, this issue of *Nature Clinical Practice Endocrinology & Metabolism* is dedicated to diabetes. The material included here should be immediately applicable to everyday endocrine practice. Some of the world's leading authorities have contributed their perspectives on a wide range of research topics. Perspectives on iatrogenic hypoglycemia and on the current status of islet cell transplantation are presented in the Viewpoint section. In the Practice Point section, commentaries are provided for three important studies. The first study examined the relationship between antihypertensive therapy and incident type 2 diabetes. The next addressed the difficulty of sustaining good glycemic control, once it has been achieved. The final study evaluated diabetes complications in adolescents. Reviews are provided for several important topics, including management of the diabetic neuropathic foot, screening for asymptomatic heart disease, fulminant type 1 diabetes, the relationship between insulin resistance and endothelial dysfunction and, finally, hyperinsulinemia in neonates. To complete this special issue, findings from recent studies are summarized in the Research Highlights section.

These times are daunting, as well as heartening, for clinicians who care for people with diabetes. On the one hand, the incidence of diabetes continues to rise with little sign of abatement. On the other hand, a tremendous volume of research continues to improve our ability to prescribe effective treatments. The information provided in this special issue will be of value to clinicians who strive to incorporate recent advances in diabetes treatment into their practices and to improve the lives of their patients with diabetes.