

# Glycemic Challenges: Diabetes Confounded by Serious Illness

## Preface

Geralyn R. Spollett, MSN, ANP,  
CDE

Diabetes and its common comorbidities, such as hypertension and hypercholesterolemia, are well known to health care professionals. Screening and treatment protocols are in place, and the role diabetes plays in these diseases, while not fully understood, is acknowledged. However, a number of other diseases often coexist with diabetes and profoundly affect glycemic control, but they have no established protocols. In many cases, the literature addressing diabetes management in the presence of other disease states is sparse. Health care professionals must piece together a management plan, guided by an amalgam of suggestions for the treatment of the resulting hyperglycemia, coupled with past clinical experiences.

This *Diabetes Spectrum* From Research to Practice section focuses on four disease states that influence glycemia and, in doing so, create dilemmas in diabetes management. Each of the articles included addresses a single disease entity and its impact on glycemic control, examines the possible causes for the metabolic alterations, and provides suggestions for clinical management.

Thyroid disease and diabetes share a bond through autoimmunity, as seen in the increased prevalence of hyperthyroidism in patients with type 1 diabetes. Hypothyroidism is also more common in patients with type 2 diabetes than in the general population. When these endocrine diseases coexist, glucose control can deteriorate. The article by Jennal L. Johnson, MS, RNC, FNP, BC-ADM, CDE, (p. 148) thoroughly reviews the normal anatomy and physiology of the thyroid and how alterations in its function affect diabetes management. She provides key concepts as well as

important management strategies for maintaining glucose control during treatment for thyroid disease.

The article by Sherry Smith Ossman, APRN, BC, CDE, on renal disease in diabetes (p. 153) examines the problem of glucose management as kidney function declines and dialysis begins. Although the alterations in glucose and insulin metabolism occur for physiological reasons that are generally understood, the resulting swings in blood glucose present an ongoing challenge to clinicians and patients alike.

Diabetes and cancer are seldom linked in the medical literature. However, standard treatment protocols for various forms of cancer include the use of steroids to reduce edema and to lessen the side effects of chemotherapy. Steroid therapy can cause profound hyperglycemia. Symptoms related to the cancer, either from the disease itself or from its treatment, can have a great effect on patients' ability to eat, exercise, and perform self-care, all of which have a significant impact on diabetes management. In her article on cancer and diabetes (p. 157), Helen M. Psarakis, RN, APRN, takes a close look at these problems and presents a framework for developing a program of care.

Early treatments for HIV and its comorbidities such as pneumocystitis showed disruption in glucose metabolism. Scientists have tried to determine whether the mechanisms seen in the virus itself predispose patients to diabetes or whether hyperglycemia is related to the pharmacological treatment or its benefits, such as weight gain. The article I contributed on HIV and diabetes (p. 163) explores the relationship between the use of antiretroviral therapy and hyperglycemia and proposes screening measures for

determining which patients may be at greatest risk for developing diabetes and which should be rescreened after the initiation of therapy.

As guest editor of this research section, I take my hat off to each of the contributing authors for doing a

superb job. Each article is presented in a way that will best help practicing health care professionals who treat patients with diabetes who also must cope with secondary illness. Because so little is written about the interactions between diabetes and other con-

founding diseases, culling the literature for the state of the science in each of these topics was a challenge. I believe the results will provide an important reference in the delivery of care to patients with diabetes.