Editor’s Message

GLP-1 Agonists: Improving the Future of Patients With Type 2 Diabetes

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More than 11% of all Americans older than 20 years and 27% of all seniors in the United States have diabetes. Type 2 diabetes mellitus, the most common form of diabetes, is a progressive disease in which β-cell function declines steadily over time and the amount of medication necessary to treat this disease increases. Historically, all people with type 2 diabetes will eventually need insulin replacement. Once thought as a dual defect disease (impaired insulin secretion and insulin resistance), type 2 diabetes more recently has been described as an “ominous octet” of pathophysiologic problems.

Today, osteopathic physicians have 8 classes of oral medications and 3 classes of injectable agents, including insulin, to choose from in treating patients with diabetes. Physicians can choose agents that focus on fasting plasma or post-prandial glucose. Cost, side effects, and interactions with other medications all should be considered when selecting a medication. Some are associated with weight loss but most contribute to weight gain. Some have had nonglycemic benefits of improved lipids while others have been shown to reduce cardiovascular risk in overweight adults. While these options allow individualization of care for patients, the choices can be overwhelming for physicians.

In this supplement to JAOA—The Journal of the American Osteopathic Association, 3 leading diabetes physicians share their expertise regarding how, when, and on whom to use one of the newer classes of diabetes agents: the glucagon-
like peptide-1 (GLP-1) agonists. Jeffrey Unger, MD, describes how an impaired “incretin effect” contributes to type 2 diabetes and then discusses the classes of medications that improve the endogenous incretin effect. He compares and contrasts the benefits and risks of the dipeptidyl peptidase-4 inhibitors and GLP-1 agonists in clinical use. Further, he shares how the GLP-1 agonists can be used in monotherapy and combination therapy.

Craig W. Spellman, DO, PhD, describes the pharmacology of GLP-1 agonists and explains why managing this pathway is so important for patients with type 2 diabetes. He provides a comparison between the currently available GLP-1 agonists and provides insight on future agents in this class. Further, he opens a discussion on GLP-1 agonists’ nonglycemic benefits, which are very important when considering cardiovascular risk.

Finally, Jeffrey Freeman, DO, provides practical advice about how and when to pick an incretin medication and how to select an agent among the GLP-1 agonists and dipeptidyl peptidase-4 inhibitors. Each of the authors use clinical case studies to provide a mechanism to apply information obtained from their article.

We hope you find this supplement informative, and we hope that after reading it, you will be able to apply your new practical knowledge in your practice.

References