Education, prevention and osteopathic principles in the management of diabetes

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The 11th edition of Harrison’s Principles of Internal Medicine was published in 1987, the year I began my osteopathic undergraduate medical education. It contained exactly 19 pages devoted to diabetes mellitus. It included a half-page entry on “oral agents,” primarily sulfonylureas, for the management of what was then known as non-insulin dependent diabetes mellitus (NIDDM).1 The entry noted that while diabetes mellitus was the most common of the serious metabolic diseases, the “true frequency” of the condition was difficult to know because of differing standards of diagnosis. The incidence—the number of new cases of diabetes diagnosed every year—was estimated at just 1% of the overall population.

In the current edition of Harrison’s, the section on diabetes has expanded to include mention of insulin secretagogues, biguanides, α-glucosidase inhibitors, and thiazolidinediones, in addition to sulfonylureas.2 The two primary categories of diabetes mellitus are now clearly designated type 1 and type 2, and maturity onset diabetes of the young (MODY) and gestational diabetes mellitus (GDM) are also described.

Noting that the worldwide prevalence of diabetes mellitus has risen dramatically, the latter edition lists the prevalence—the total number of cases—among individuals greater than 65 years of age at 20.1%. This is a staggering increase. Diagnosis, of course, has been made easier and simpler with criteria that emphasize the fasting plasma glucose as a reliable and convenient test in asymptomatic individuals.

While much has changed in our understanding of diabetes in the last two decades, several constants remain noteworthy:

- the need to continue patient education
- the need to dispel common myths
- the need to promote appropriate nutrition and exercise
- the need to understand the positive role of using osteopathic manipulative treatment (OMT) and applying osteopathic principles.

To this list, we can add a better understanding of the promise of clinical genetics, simplifying seemingly complex management approaches, and the role of the medical home in successfully addressing diabetic patients’ needs.

This monograph is the first of a 2008 four-part series of articles for osteopathic physicians on the modern, current approaches...
to the diagnosis, treatment and management of diabetes mellitus.

The focus of this first part includes a discussion of the value of prevention strategies, an understanding of the myths associated with diabetes and how they can be dispelled, and a recognition of the unique role of OMT and the osteopathic philosophy in managing diabetic patients.

Maureen Crowley, MD, MPH, director of the division of preventive medicine at Suffolk County Department of Health Services in New York, is an internist who wonderfully demonstrates and summarizes the evidence in support of primary, secondary and tertiary prevention strategies, noting that such an approach is not only possible and powerful but proven. She also cautions that if significant and sweeping lifestyle changes are not adopted, one third of the people born in the United States since the year 2000 will develop diabetes.

Aware that misinformation is the greatest single obstacle to successful management, Cheryl Rosenfeld, DO, an endocrinologist and diabetes expert in Denville, NJ, points out in a question-and-answer session that not only do many patients accept some popular myths about diabetes but so do some referring physicians. While many of us may be accustomed to dealing with health illiteracy, generally and as it relates to diabetes, Dr Rosenfeld notes the dilemma of dealing with a patient population that is ostensibly too well-informed.

Finally, I point out some of the ways in which an osteopathic philosophy and approach to the management of patients with type 2 diabetes mellitus can and should encompass much more than OMT. While there is promising research being done within the osteopathic profession in looking at OMT, and one specific example is cited at length, the promotion of adequate exercise and appropriate diet and nutrition for diabetic patients is, as Felix J. Rogers, DO, pointed out some years ago, an osteopathic approach that is wholly consistent with the principles of the profession first espoused by Andrew Taylor Still, MD, DO.

Future issues of this series will include discussions of the role of clinical genetics and the human genome, ways of simplifying some of the complexities of diabetes management, and a better understanding of healthcare disparities in diagnosing, preventing and treating a condition that has been known since antiquity.