Letter to the Editor

To the Editor:

In your article "CONSENSUS STATEMENT BY THE AMERICAN ASSOCIATION OF CLINICAL ENDOCRINOLOGISTS AND AMERICAN COLLEGE OF ENDOCRINOLOGY ON THE COMPREHENSIVE TYPE 2 DIABETES MANAGEMENT ALGORITHM – 2016 EXECUTIVE SUMMARY" published in the January 2016 issue of *Endocrine Practice*, your algorithm for the treatment of type 2 diabetes mellitus makes no mention of the therapeutic utility of a plant-based diet, giving it only passing mention with reference to obesity.

It has long been known and documented that vegetarians in general, and vegans in particular, have much lower rates of type 2 diabetes. This has led to the investigation of the efficacy of plant-based diets as a type 2 diabetes treatment. The results of research are compelling. In a number of studies, vegetarians and vegan diets have been shown to be safe and efficacious treatments for type 2 diabetes, and their effects rival drugs such as metformin. These studies have demonstrated improvements across a broad range of clinical variables.

In one study that emphasized employing a plant-based diet, good results were obtained in diabetic patients. After a median diet length of 7 months, the mean glycated hemoglobin (HbA1C) dropped from 8.2% to 5.8% (P = .002), with 62% of participants reaching normoglycemic levels (HbA1C <6.0%) (1). A 22-week study showed a drop of 1.23 HbA1C points on a vegan diet. As in other studies, those on the plant-based diet had better reductions in body mass index (BMI) and cholesterol levels (2).

Looking more broadly at other variables, a 24-week study of diabetics placed on a vegetarian diet showed a wide range of effects including improvements in adipocytokines and inflammatory markers, BMI, fasting glucose, and HbA1C as they have in other studies. Moreover, highly sensitive cardio reactive protein and homocysteine levels fell, both very desirable effects, indicating reduced inflammation and less insulin resistance. In addition, adiponectin levels rose, which is also a desirable effect indicating improved insulin sensitivity. Resistin and leptin both were reduced, again indicating less insulin resistance (3).

While the recommendation for most patients to increase exercise is sound, many are not compliant. It is therefore important to determine the benefit of dietary intervention independent of exercise. In a small 12-week pilot study, the use of a low-fat, vegetarian diet in patients with non-insulin dependent diabetes was associated with significant reductions in fasting serum glucose concentration and body weight, in the absence of increased exercise. The mean fasting serum glucose of the experimental group, from 10.7 to 7.75 mmol/L (195 to 141 mg/dL). The mean weight loss was 7.2 kg and was significantly better than the control group (P<.05) (4).

In a 7-month study by Jenkins et al, a high-protein vegetarian diet utilizing meat and dairy analogues such as veggie burgers, veggie sausages (containing soy and wheat gluten proteins) and soy milk, along with tree nuts, was compared with a high-carbohydrate vegetarian diet as a control. The experimental diet achieved the same significant reductions in homeostatic model assessment-insulin resistance and fasting glucose as the control group. However, the experimental group achieved significantly greater weight loss, reduction in BMI, total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), TC: high-density lipoprotein cholesterol (HDL-C), and apolipoprotein B (APOB) and APOB:APOA1 and coronary heart disease (CHD) 10-year risk on the experimental diet. Given the popularity of meat and dairy analogues and tree nuts, patients preferring these foods may be able to achieve the same glycemic control while achieving even greater reduction in CHD risk (5).

Your algorithm rightly focuses on the increased risk of coronary artery disease type 2 diabetics face. Here the plant-based diet has also shown efficacy (6) . While the algorithm did not address complications of type 2 diabetes mellitus such as diabetic peripheral neuropathy, here good results are also obtained with a plant-based diet in an otherwise hard-to-treat disease (7).

Patient compliance on plant-based diets has been very good in almost all studies. For instance, one study reported 99% compliance (8) . In a 22-week study, 94% of subjects on a vegan diet were compliant (2).

Treatment with a plant-based diet has no adverse reactions and no contraindications, treats several comorbidities, and is extraordinarily cost effective, making it worthy of a prominent place in your algorithm.

Respectfully,

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See accompanying article, p. 000.

DISCLOSURE

The authors have no multiplicity of interest to disclose.

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