COMMENTS AND RESPONSES

Comment on: Rizzo et al. Reduction of Oxidative Stress and Inflammation by Blunting Daily Acute Glucose Fluctuations in Patients With Type 2 Diabetes: Role of Dipeptidyl Peptidase-IV Inhibition. Diabetes Care 2012;35:2076–2082

Rizzo et al. (1) report some remarkable differences in mean absolute glucose excursions (MAGE), markers of oxidative stress, and markers of inflammation in a randomized, open-label trial of sitagliptin 100 mg once daily versus vildagliptin 50 mg twice daily. MAGE is a measure of large glycemic swings, taking into account only those excursions that are larger than 1 SD of the mean glucose. Typically, in type 2 diabetes such large excursions are postprandial excursions. A much larger reduction in MAGE was reported for vildagliptin than for sitagliptin. However, the reduction in fasting plasma glucose and postprandial glucose was similar for both drugs. So which large swings were abolished by vildagliptin but not by sitagliptin? A graph displaying changes and differences in mean glucose values per hour over the 2 days with three test meals each would be helpful. Furthermore the question arises whether the differences in glycemia arise from a reduction in large excursions (best determined by MAGE), a reduction in glucose dispersion (best determined by the SD), or change in glucose over time (best determined by mean absolute glucose change) (2). Finally, mean glucose, highly correlated to MAGE and other measures of variability, is not reported. I hope the authors can provide us with all these outcomes, to better understand their findings.

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