COMMENTS AND RESPONSES

Response to Comment on: Sun et al. Protection From Retinopathy and Other Complications in Patients With Type 1 Diabetes of Extreme Duration: The Joslin 50-Year Medalist Study. Diabetes Care 2011;34:968–974

We thank Conway et al. (1) for the discussion of their findings regarding skin intrinsic fluorescence in the Pittsburgh Epidemiology of Diabetes Complications (EDC) study cohort. Their results—that skin intrinsic fluorescence values are higher in individuals with no diabetic retinopathy (DR) as compared with more advanced DR—are consistent with our findings in the Medalist cohort in which increased concentrations of certain advanced glycation end products (carboxymethyl-lysine [CML] and the early glycation product fructoselysine in the Medalists) were associated with protection from proliferative DR. Our findings of an inverse relationship between CML levels and proliferative retinopathy may suggest low levels of endothelial or inflammatory cell receptor for advanced glycation end product expression or activation (2) in response to its ligand CML in these participants.

In contrast to the Medalist group in which no difference in glycemic control was found between those with and without proliferative DR, the EDC participants without DR had better glycemic control than those with DR. This difference may reflect the fact that the EDC population had a shorter average duration of diabetes than the Medalists (41 vs. 57 years) and thus may have a lower percentage of participants with elevated protective factors against complications. Nonetheless, this report further confirms the existence of a subgroup of individuals who appear to be highly protected against the detrimental effects of chronic hyperglycemia and supports additional characterization of this unique population in hopes of identifying novel protective factors against retinopathy and other microvascular complications of diabetes.

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References

1. Conway BN, Maynard JD, Orchard TJ. Comment on: Sun et al. Protection from retinopathy and other complications in patients with type 1 diabetes of extreme duration: the Joslin 50-Year Medalist Study. Diabetes Care 2011;34:968–974 (Letter). Diabetes Care 2011;34:e148. DOI: 10.2337/dc11-0971
2. Pachydaki SI, Tari SR, Lee SE, et al. Upregulation of RAGE and its ligands in proliferative retinal disease. Exp Eye Res 2006;82:807–815

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