RESPONSE TO COMMENT ON PILZ ET AL.

Insulin Sensitivity and Albuminuria: The RISC Study. Diabetes Care 2014;37:1597–1603

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We thank Bastard and Fellahi (1) for their comments on our RISC (Relationship between Insulin Sensitivity and Cardiovascular Disease) study results (2). We showed in healthy individuals that reduced insulin sensitivity, assessed by the hyperinsulinemic-euglycemic clamp and expressed as the M/I value, is continuously associated with a greater risk of increasing albuminuria (2). Oral glucose tolerance test–based insulin sensitivity and homeostasis model of assessment of insulin resistance were not significantly associated with urinary albumin-to-creatinine ratio (UACR) (2). In this context, Bastard and Fellahi raised the question as to whether other surrogates of insulin sensitivity, such as the triglycerides and glucose index, McAuley index, or the revised quantitative insulin sensitivity check index, are significantly associated with albuminuria (1,3). We therefore performed multiple linear regression analyses using the same covariates as in our original RISC study article to assess whether these indices are associated with UACR (2). As a result, we found that none of these surrogates of insulin sensitivity were significantly associated with UACR at baseline or at follow-up ($P > 0.05$ for all). Hence, it seems that in a healthy population only the M/I value predicts increasing albuminuria. However, this finding does not argue against the utility of more simple surrogates of insulin sensitivity or insulin resistance for the prediction of other clinically relevant outcomes. For example, also in the RISC study, fasting insulin was more strongly associated with the metabolic syndrome and with carotid intima-media thickness than the M/I value (4). Nevertheless, the hyperinsulinemic-euglycemic clamp is the gold-standard method for the assessment of insulin sensitivity (5). Therefore, the finding that in the RISC study only the M/I value, but not other surrogates of insulin sensitivity, is significantly associated with UACR supports the hypothesis that it is reduced insulin sensitivity per se that is related to albuminuria (2).

Duality of Interest. No potential conflicts of interest relevant to this article were reported.

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