COMMENTS AND RESPONSES

Serum Levels of Adipokine Retinol-Binding Protein-4 in Relation to Renal Function

Response to Papavasileiou et al.

We thank Papavasileiou et al. (1) for their comments concerning our recent findings on circulating retinol-binding protein (RBP)-4 in relation to renal function. The authors describe findings similar to those in our study: upregulation of circulating RBP-4 in hemodialysis patients and a significant correlation between RBP-4 and serum creatinine in univariate analysis.

In addition, they convincingly show that like creatinine, surrogates of nutrition such as lean body mass and protein catabolic rate independently predict RBP-4 serum concentrations in multivariate analysis. Moreover, they present a multivariate model in which Kt/V_{urea} independently predicts circulating RBP-4. In the Kt/V_{urea} model, the association with creatinine is lost ($P = 0.086$); however, the relatively small number of hemodialysis patients ($n = 36$) might be responsible for this effect. In our opinion, these interesting findings suggest that treatment inadequacy and protein malnutrition might, along with renal impairment, contribute to increased RBP-4 concentrations in hemodialysis patients. Interestingly, another adipocyte-secreted cofactor, leptin, has also been associated with hemodialysis-induced malnutrition (2).

Unfortunately, no data are presented in the letter by Papavasileiou et al. concerning the association between circulating RBP-4 and markers of renal function and nutrition in healthy control subjects. We have recently shown that RBP-4 also correlates with serum creatinine in univariate and multivariate analyses in patients with a glomerular filtration rate >50 ml/min (3), further supporting the notion that renal excretion is a primary pathway for RBP-4 clearance. In future studies, it will be interesting to determine whether circulating RBP-4 is also associated with nutritional status in patients with normal renal function.

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