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The authors declare no conflict of interest.

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Resistin/uric acid index for weight loss prediction?



To the Editor:

I read with interest the report by Zurita-Cruz concerning the utilization of a resistin/uric acid index as a prognostic marker for body mass index (BMI) reduction.¹

It is intriguing that both uric acid alone and the resistin/uric acid index provided significantly different values for those with vs those without BMI z-score reduction with metabolite scores of 6.3 ± 1.7 vs 5.3 ± 0.7 ($P \leq .001$) and 2.7 ± 0.6 vs 2.2 ± 0.9 ($P = .02$). It has previously been noted that uric acid alone can predict weight loss in those undergoing weight loss surgery.² Could uric acid, as a more commonly tested (and thus less expensive) metabolite, prove just as useful as the suggested index in weight loss prediction within this tested cohort?

It would be of interest to know how the composite indices were formed. It is surprising that the leptin/uric acid index performs so poorly when one would suspect an additive or multiplicative composite index to maintain a higher score (even if not significant) in those with a BMI z-score reduction than those without.

Comorbidities associated with obesity were recorded, but were not reported or included as controlled covariates within the analysis. Knowing these may provide interesting insights to ensure that confounding aspects of a metabolic syndrome are not contributory to the results.

Finally, it is increasingly recognised that BMI may not be the most accurate method for determining adiposity

within children. This has been found to be most notable within teenage boys who, perhaps coincidentally, are the subgroup for whom the resistin/uric acid index has been found to be most useful within this study.³ It would be beneficial to see further studies or analyses confirming efficacy of this measure using triponderal mass index or waist-to-height ratio.

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Reply



To the Editor:

We appreciate Dr Dore's comments regarding our study on the usefulness of the resistin/uric acid index to predict weight loss in adolescents with overweight or obesity.

First, we agree that in the group where there was a decrease in body mass index (BMI), both uric acid and the resistin/uric acid index had different values than those in the group with no BMI reduction. However, we clarify that, in the first group, uric acid levels were higher (6.3 ± 1.7 vs 5.3 ± 0.7), but it was the opposite for resistin/uric acid index (2.7 ± 0.6 vs 3.0 ± 0.4) (see Table II).

Unlike previous studies, we observed that there was an inverse correlation of high levels of uric acid with decrease of Δ BMI z-score, in contrast, the resistin/uric acid index values were associated with reduced BMI and weight loss (see Figure 1 and Table III). These discrepancies may be due to the study design. Menekos et al reported that higher uric acid levels were found in adults who lost more weight after bariatric surgery, but these patients were only evaluated in the first month after the surgical event.¹ In our study, adolescents with overweight or obesity were evaluated for one year, under supervised lifestyle interventions.

Regarding leptin levels, because we did not find them associated with changes in BMI or weight, our results seem to confirm that at the time of measurement, serum leptin levels are correlated with adiposity values.^{2,3} For resistin levels, they could be considered as a predictor of long-term outcomes, as already described.^{4,5}

In contrast, the effect of the comorbidities associated with obesity was analyzed. In the linear regression model of Δ BMI z-score which included hypertriglyceridemia, hypoalbuminemia, and high levels of low-density lipoprotein cholesterol, the coefficients for resistin/uric acid index (0.17) and males (0.15) were similar to those described in Table V. Of note, in this analysis none of the relationships with these three comorbidities was statistically significantly ($P = .795$, $P = .839$, and $P = .734$, respectively).

Last, the comment on triponderal mass index is very interesting, so we proceeded to carry out the same analyses used for the Δ BMI z-score. Overall, we had similar results, particularly in the linear regression model for Δ triponderal, the coefficient obtained from the resistin/uric acid index was 0.58 (95% CI, 0.25-0.91), which was greater than those obtained Δ BMI z-score.

We agree it is important to do more research to validate our findings, before they are used as part of the routine screening of adolescents with overweight or obesity.

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Poor asthma control remains a risk factor for severe anaphylaxis



To the Editor:

We have read with interest the report by Dribin et al investigating the association between history of asthma and anaphylaxis severity in children.¹ The authors concluded