

## Evaluation of the Serum Uric Acid: Important Issues

I read with interest the recently published article in *Indian Pediatrics* reporting the association between hematological indices and serum uric acid in adolescents with hyperuricemia [1]. Serum uric acid levels were found to be correlated with white and red blood cell count, hematocrit, and hemoglobin in adolescents with hyperuricemia. However, some issues need clarification:

First, in the original study, it was stated that hyperuricemia was defined as serum uric acid level >5.5 mg/dL and the same level was used as an inclusion criteria for adolescents aged between 11 and 21 years. Moreover, majority (78%) of 607 adolescents were boys. Reference values of serum uric acid are different, based on age and gender [2-5]. The use of this single value (>5.5 mg/dL) for the diagnosis of hyperuricemia does not seem appropriate. Second, it is stated that diabetes mellitus and hypertension were used as exclusion criteria in the original study. However, it is also indicated that 187 (31 %) of adolescents

had metabolic syndrome (MetS). This seems to be contradictory.

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## Evaluation of Serum Uric Acid: Authors' Reply

We agree that reference values of serum uric acid can vary, based on age and gender. Women tend to have lower levels (by 0.5 to 1.0 mg/dL) than men, probably because of the uricosuric effect of estrogens [1]. However, in this study, we used the levels which are considered to correlate with primary hypertension in nearly 90% of teenagers [2]. Moreover, the relation between uric acid and cardiovascular disease has been observed not only with frank hyperuricemia (>6 mg/dL in women and >7 mg/dL in men), but also with uric acid levels considered to be in the normal to high range (>5.2 to 5.5 mg/dL) [3]. Therefore, we decided to take this cut-off point in both genders. However, we agree that our study dealt with hematological parameters and platelet count in adolescents with 'high normal' uric acid levels rather than age- and gender-based reference values [4,5].

With regard to the exclusion criteria, we would like to clarify that primary hypertension was not an exclusion criteria. Moreover, most of the children included in the study were referred to our department in the primary care office because of elevated casual blood pressure. Only children with secondary forms of hypertension were

excluded. Similarly, excluded children were diagnosed with diabetes, but not with metabolic syndrome. We used the age- and gender-specific adolescent metabolic syndrome criteria linked to the National Cholesterol Education Program Adult Treatment Panel III.

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