Is Weight Loss an Effective Strategy to Decrease Serum Uric Acid Levels Without Use of Antihyperuricemic Medications?

To the Editor:

In their study of 1185 women and 1968 men, each of whom underwent 2 general health screening visits about 1 year apart, Ishizaka and colleagues report that percentage change in body mass index (%dBMI) is a predictor of the percentage change in uric acid levels (%dUA) in men and postmenopausal women, but not in premenopausal women[1]. As none of the patients was taking drugs to treat hyperuricemia at either visit, the authors conclude that "weight loss may represent an effective strategy to decrease serum UA levels without use of antihyperuricemic medications, especially in postmenopausal women and men." The basis for this conclusion is questionable in light of the slope estimates relating %dBMI to %dUA.

Ishizaka, *et al* found that the best fitting equations relating the 2 variables (without statistical controls) are as follows: for men, %dUA = –0.05 + 0.35(%dBMI); for postmenopausal women, %dUA = 0.68 + 0.66(%dBMI). Notice that to lower UA by 25%, say from 8.0 to 6.0 mg/dl, men would have to lower their BMI, and therefore their weight, by 71%. Postmenopausal women would have to lower their weight by 39%. Neither weight loss scenario is practicable. The results were similar for the stepwise multiple regression models that controlled for potential confounders (for men, the %dBMI → %dUA unstandardized slopes range from 0.32 to 0.38; for postmenopausal women, the %dBMI → %dUA unstandardized slopes range from 0.53 to 0.55). Regardless of the statistical procedure employed, the slope coefficients appear to be too small to support the conclusion that weight reduction may be an effective nonmedical strategy for decreasing serum UA levels.

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