

# Letter to the Editor

## The importance of visceral adipose tissue as a scale for assessing the metabolic syndrome and obesity

Dear Editor,

We have read the article entitled "Potential role of bioavailable curcumin in weight loss and omental adipose tissue decrease: preliminary data of a randomized, controlled trial in overweight people with metabolic syndrome: preliminary study" with great interest<sup>1</sup>. Di Pierro et al<sup>1</sup> investigated in this valuable work the effects of curcumin on the weight management among the patients with metabolic syndrome (MetS). Consequently, they demonstrated that curcumin contribute to the weight management through improving the anthropometric measurements such as body mass index (BMI), hip circumference and waist circumference (WC).

Anthropometric measurements have been widely used as significant parameters for the detection of obesity and metabolic syndrome. However, recently some researches suggest that BMI and WC cannot fully reflect the amount of body fat. Some authors reported that BMI has contradictory results in correlation with body fat and is not an accurate indicator for body fat. Moreover, it was reported that WC, an important risk factor for MetS and diabetes, is also inadequate in the evaluation of fat tissue deposition<sup>2,3</sup>. Therefore, in the studies investigating obesity and MetS, usage of more reliable techniques such as quantifying of visceral adipose tissue (VAT), total abdominal adipose tissue (TAT), and subcutaneous adipose tissue (SCAT) using computed tomography and magnetic resonance imaging are recommended to avoid conflicting results. Through these measurements, more accurate data can be obtained, so conflicting results may be eliminated. Because it is a simple and more reliable index, it can serve as a benchmark test in the studies related to obesity, MetS and fat tissue deposition<sup>4</sup>. In the patients with MetS and obesity, we had previously demonstrated significant correlation between the amount of VAT and insulin resistance<sup>5</sup>.

We believe that if the VAT, SCAT and TAT were measured in this study, the study might have illuminated the effects of curcumin on the weight management in many aspects.

### Conflict of Interest

The Authors declare that they have no conflict of interests.

### References

- 1) DI PIERRO F, BRESSAN A, RANALDI D, RAPACIOLI G, GIACOMELLI L, BERTUCCIOLI A. Potential role of bioavailable curcumin in weight loss and omental adipose tissue decrease: preliminary data of a randomized, controlled trial in overweight people with metabolic syndrome. Preliminary study. *Eur Rev Med Pharmacol Sci* 2015; 19: 4195-4202.
- 2) SMALLEY KJ, KNERR AN, KENDRICK ZV, COLLIVER JA, OWEN OE. Reassessment of body mass indices. *Am J Clin Nutr* 1990; 52: 405-408.
- 3) RHEEDER P, STOLK RP, VEENHOUWER JF, GROBBEE DE. The metabolic syndrome in black hypertensive women-waist circumference more strongly related than body mass index. *S Afr Med J* 2002; 92: 637-641.
- 4) SMITH SR, ZACHWIEJA JJ. Visceral adipose tissue: a critical review of intervention strategies. *Int J Obes Relat Metab Disord* 1999; 23: 329-335.
- 5) OZCELIK F, YUKSEL C, ARSLAN E, GENÇ S, OMER B, SERDAR MA. Relationship between visceral adipose tissue and adiponectin, inflammatory markers and thyroid hormones in obese males with hepatosteatosis and insulin resistance. *Arch Med Res* 2013; 44: 273-280.

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