

## Association of Vaspin with Metabolic Syndrome: The Pivotal Role of Insulin Resistance (*Diabetes Metab J* 2014;38:143-9)

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### **Dear Editor,**

Vaspin is an interesting adipokine, which was isolated from visceral white adipose tissue of obese, diabetic rat model [1,2]. Because there has been reports regarding the tight link between metabolic diseases, such as obesity, diabetes, and metabolic syndrome (MS), and visceral fat, vaspin has been focused as a potential biomarker for various metabolic diseases [3-5]. However, different vaspin concentrations showed a large scale of standard deviation in different individuals and a lack of consistency between metabolic parameters and the levels of vaspin according to previous reports, warranting more human studies and clearer explanations.

In this article entitled “Association of vaspin with MS: the pivotal role of insulin resistance”, Esteghamati et al. [6] also showed the association between serum vaspin concentration and the components of MS in Iranian adults [6]. They showed that vaspin is associated with the components of metabolic syndrome: high triacylglyceride (TG) level, high glucose in particular, and obesity indices. However this association was abolished after the adjustment for homeostasis model assessment of insulin resistance and high-sensitivity C-reactive protein levels. Recently, our group reported that serum vaspin concentration was higher in men with MS and in women with coronary atherosclerosis in around 400 Korean subjects [7]. Among the components of MS, body mass index (BMI), waist circum-

ference, and TG showed independent associations with plasma vaspin levels. Although these previous Iranian study and Korean study similarly investigated the correlation between serum vaspin levels and various metabolic parameters, there are several differences.

Our data did not show any significant correlation between vaspin concentration and serum glucose. Our subjects were enrolled from routine health examination center and showed relatively normal range of serum glucose levels (mean value of 94 mg/dL in normal subjects vs. 115.3 mg/dL in MS subjects). However, fasting glucose levels showed a strong correlation in the article of Iranian subjects, showing the highest odds ratio among the components of MS in both men and women. In that study, the mean value of plasma glucose level was over 140 mg/dL and the mean BMI is over 27.9 in men and over 29.07 in women. On the contrary, the data from Korean subjects showed that the mean value of BMI was around 24, which is drastically different from Iranian subjects.

It is interesting to see this article considering the huge differences in anthropometry and clinical characteristics between Korean and Iranian subjects with or without MS. The higher fasting blood glucose and much higher obesity index of Iranian subjects could influence on the stronger influence of insulin resistance and chronic inflammation on serum vaspin concentration. Of note, despite these differences between two

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ethnic groups, hyper-TG and obesity index was a common metabolic factors, which showed significant correlation with vaspin levels in both groups. Overall, vaspin should be investigated in more detail to understand its role in humans.

## CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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