



Changes and clinical significance of serum vaspin levels in patients with type 2 diabetes

L. Yang*, S.J. Chen*, G.Y. Yuan, D. Wang and J.J. Chen

Department of Endocrinology, Affiliated Hospital of Jiangsu University, Zhenjiang, Jiangsu Province, China

*These authors contributed equally to this study.

Corresponding author: G.Y. Yuan

E-mail: yuanguo_yue@126.com

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ABSTRACT. We investigated serum visceral adipose tissue-derived serpin (vaspin) levels in patients with normal glucose regulation and recently diagnosed type 2 diabetes (T2DM) and explored the association between vaspin and body mass index, age, gender, glucose, lipid metabolism, and insulin sensitivity. Fasting serum vaspin levels in 66 patients with T2DM and 48 normal subjects were detected using enzyme-linked immunosorbent assay. We found that serum vaspin levels in the DM group were 0.65 ± 0.13 $\mu\text{g/L}$ in non-obese patients and 1.13 ± 0.25 $\mu\text{g/L}$ in obese patients. Serum vaspin levels in the control group were 0.38 ± 0.18 $\mu\text{g/L}$ in non-obese patients and 0.95 ± 0.11 $\mu\text{g/L}$ in obese patients. Average serum vaspin levels were significantly higher in obese patients than in non-obese patients in both the DM group and control group. In the DM group, the serum vaspin level was 0.76 ± 0.22 $\mu\text{g/L}$ in males and 0.92 ± 0.35 $\mu\text{g/L}$ in females. In the control group, the serum vaspin level was 0.48 ± 0.14 $\mu\text{g/L}$ in males and 1.05 ± 0.21 $\mu\text{g/L}$ in females. Association analysis showed that serum vaspin levels were significantly associated with body mass index, waist-to-rip ratio (WHR), fat percentage, triglyceride, fasting plasma insulin, and insulin sensitivity index. Stepwise multiple regression analysis showed that

gender, insulin sensitivity index, and WHR were the most significant independent factors affecting vaspin. Therefore, serum vaspin levels were significantly elevated in obese people and were independently associated with WHR, gender, and index sensitivity index.

Key words: Insulin resistance; Visceral adipose tissue-derived serpin; Diabetes