

□ LETTERS TO THE EDITOR □

High Iron Stores and the Relationship between Metabolic Syndrome and Proteinuria

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To The Editor

Miyatake and colleagues found a close relation between metabolic syndrome and proteinuria in a Japanese population (1). We suggest that elevated body iron stores may have a role in this synergistic pathological association.

Serum ferritin, a good indicator of iron stored in the body, has been reported to correlate both with components

of metabolic syndrome (2) and overt proteinuria (3). The elevated levels of serum ferritin in patients with overt proteinuria could not be explained as an acute phase response (3).

On the other hand, withdrawal of red meat (a rich source of heme iron) from the usual diet has been shown to reduce the urinary albumin excretion rate in patients with type 2 diabetes and proteinuria (4). Moreover, induction of near iron deficiency in carbohydrate intolerant subjects has been shown to improve insulin sensitivity and other cardiac risk factors (5). Another intervention study in type 2 diabetic patients with elevated ferritin levels demonstrated that even a lesser degree of iron removal by blood letting, resulting in 50% reduction of serum ferritin concentrations, improved glycemia, insulin sensitivity and vascular dysfunction (6).

High iron stores should be considered as an adjunctive risk factor for the development of proteinuria in individuals with metabolic syndrome. Induction and maintenance of a state of iron depletion should be evaluated as a practical modality in the treatment of metabolic syndrome.

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