Diabetes, Metabolic Syndrome and Obesity

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LETTER

High Urine Albumin-to-Creatinine Ratio is Associated with Increased Arterial Stiffness in Diabetes: A Chinese Cross-Sectional Study [Letter]

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Dear editor

As of now, a body of evidence-based studies has shown that an elevated urine albumin-to-creatinine ratio (UACR) plays a crucial role in microvascular circulation dysfunction, such as diabetic nephropathy (DN) and diabetic retinopathy (DR). However, the literature on the relationship between the UACR and peripheral arterial stiffness in patients with diabetes mellitus remains sparse. Encouragingly, Guo K's team recently published their findings in an original article entitled "High Urine Albumin-to-Creatinine Ratio is Associated with Increased Arterial Stiffness in Diabetes: A Chinese Cross-Sectional Study" in Diabetes Metabolic Syndrome and Obesity.[1]

This study was a cross-sectional survey of a Chinese population with diabetes. The relationship between log2-transformed UACR and arterial stiffness assessed by brachial-ankle pulse wave velocity (baPWV) was analyzed using linear curve fitting analyses, multiple logistic regression models, and stratified analyses. They found that the greater the baPWV was, the greater the log2-transformed UACR. They concluded that an elevated UACR was associated with arterial stiffness in individuals with diabetes.

Although this is an impressive study, the research design still has some limitations. First, there was a lack of bone mineral density data. The median age of the participants in the current study was over 58 years, which must be mixed with elderly females with postmenopausal osteoporosis. However, osteoporosis is closely related to arteriosclerosis.[2] Second, the baseline data did not include total cholesterol (TC) and triglyceride (TG) indexes. A large number of studies have confirmed the associations between atherosclerosis and TC and TG levels.[3] Third, there was a lack of thyroid function data. Hyperthyroidism is closely related to atherosclerosis.[4] Fourth, there was a lack of precise data on antidiabetic therapies. Both oral SGLT2i and GLP1-RA injections can reduce the UACR in the short term and delay the progression of atherosclerotic cardiovascular disease (ASCVD) in the long term, increasing the differences between groups.[5,6]

To summarize, we fully agree with this study's findings despite some shortcomings in the research design. As mentioned above, further improvement in the study design can provide more reliable guidance for clinical practice.

Disclosure

The authors report no conflicts of interest in this communication.

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