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LINK BETWEEN MALE DIABETICS WITH ALLERGIES AND KIDNEY DISEASE- NOTHING TO SNEEZE AT

Inflammatory Cell Count Linked to Diabetic Nephropathy

Washington, DC (Friday, September 25, 2009) — For men with type 2 diabetes, a cell type linked to allergic inflammation is closely linked to a key indicator of diabetic kidney disease (nephropathy), suggests a study in the November *Clinical Journal of the American Society of Nephrology* (CJASN). "Allergy is a common disease that is increasing worldwide, so our findings may have important implications for diabetic nephropathy," comments Michiaki Fukui, MD (Kyoto Prefectural University of Medicine, Japan).

The researchers compared the eosinophil count with albumin excretion rate in nearly 800 patients with type 2 diabetes. Eosinophils are a type of white blood cell that contributes to inflammation in allergic diseases. The albumin excretion rate is a key indicator of kidney disease, one of the major complications of diabetes.

In men, a higher number of eosinophils in the blood correlates with higher urinealbumin—a critical early sign of diabetic kidney disease. Surprisingly, the link between eosinophil count and albumin excretion rate was even stronger than for known risk factors like high blood pressure and poor diabetes control. The eosinophil count was unrelated to albumin excretion in diabetic women.

Previous studies have suggested that patients with asthma and other allergic diseases are at increased risk of heart disease. Heart disease is the main cause of death in diabetics, and nephropathy is a major risk factor for heart disease. If the results are confirmed by future studies, then the eosinophil count might help in estimating the risk of diabetes-related kidney and heart disease in men.

Some of the anti-inflammatory treatments used by patients with allergies can lower the eosinophil count, and it's possible that these treatments could also benefit male patients with diabetes, Fukui believes. He adds, "The intriguing concept of a role for eosinophils in diabetic nephropathy holds great promise for the development of new preventive measures involving anti-allergic agents."

MORE

The study can't prove any cause-and-effect relationship between eosinophil count and albumin excretion rate. More research will be needed to determine why the relationship was found only in men, and whether a similar link is also present in patients without diabetes.

The authors reported no financial disclosures. Other authors were Muhei Tanaka, Masahide Hamaguchi, Takafumi Senmaru, Kazumi Sakabe, Emi Shiraishi, Ichiko Harusato, Masahiro Yamazaki, Goji Hasegawa, all of Kyoto Prefectural University of Medicine.

The study entitled, “Eosinophil Count Is Positively Correlated with Albumin Excretion Rate in Men with Type 2 Diabetes,” will appear online at <http://cjasn.asnjournals.org/> on Thursday, October 1, 2009, doi 10.2215/CJN.03330509.

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