New treatment significantly slows progression of eye damage in persons with type 1 diabetes

July 1 2009

University of Minnesota Medical School researcher Michael Mauer, M.D., has found a treatment that significantly slows the progression of eye injury in people with type 1 diabetes, a common complication caused by this disease. By administering an antihypertensive, medication commonly prescribed to treat high blood pressure, Mauer and colleagues were able to slow progression of diabetic eye damage in more than 65 percent of participants involved in the study.

Diabetes is the primary cause of acquired blindness in adults and accounts for nearly half of all new cases of chronic kidney failure in the Unites States each year, and people living with the disease often struggle with these complications as it progresses.

Previous studies of people with type 1 diabetes who were already exhibiting symptoms of vision and kidney function loss showed that these types of antihypertensive medications slowed further function loss in the kidneys, but often could not prevent kidney failure. Mauer and colleagues were interested in testing whether or not they could delay diabetic kidney injury in participants who had normal blood pressure and had not yet shown signs of kidney disease at the beginning of the study.

Three groups of participants were observed over the course of five years. Two groups were administered one of two antihypertensive medications,

losartan or enalapril, and the last group, a placebo. The results were unexpected, but conclusive. Mauer's study demonstrated that these drugs did not protect the participants' kidneys from damage or from losing function. However, participants who were administered either enalapril or losartan experienced a significant slowing of the progression of diabetic eye injury, by 65 and 70 percent, respectively.

"The secondary results of this study showed that people taking these antihypertensive medications experienced a substantially positive effect in slowing diabetic eye injury," said Mauer, professor of pediatrics and medicine in the Medical School. "Although neither medication delayed early kidney tissue injury or early loss of kidney function, the advantage to a study with negative findings such as this one is that physicians now know that this treatment is ineffective for this purpose, and they can pursue other treatment options that may improve their patients' outcomes."

Although the data does not support the use of these types of antihypertensives to prevent kidney damage in people living with diabetes, Mauer and colleagues find it reasonable for physicians to consider prescribing these classes of medication to people with type 1 diabetes in order to slow the onset and progression of diabetic eye disease. He notes, though, that this also poses several other unanswered questions such as at what age a person with diabetes should be prescribed this class of drug and how long they should continue taking it.

More information: Mauer's study "Renal and Retinal Effects of Enalapril and Losartan in Type 1 Diabetes" is published in the July 2nd issue of *The New England Journal of Medicine*. An editorial accompanies the article.

Source: University of Minnesota (news : web)

Citation: New treatment significantly slows progression of eye damage in persons with type 1 diabetes (2009, July 1) retrieved 23 April 2024 from https://medicalxpress.com/news/2009-07-treatment-significantly-eye-persons-diabetes.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.