

New research links diabetes to cognitive deterioration

March 5 2009

Blindness, renal failure, stroke and heart disease are potential complications of type 2 diabetes, which currently afflicts more than 15 million Americans. Now research from Tel Aviv University has found more worrying news — type 2 diabetes can be a risk factor accelerating cognitive decline and dementia.

Dr. Tali Cukierman-Yaffe, a physician and researcher from TAU's Sackler School of Medicine, found that people with diabetes were 1.5 more likely to experience cognitive decline, and 1.6 more likely to suffer from dementia than people without diabetes. Her recent publication in the journal *Diabetes Care* suggests that higher-than-average levels of blood glucose (blood sugar) may have a role in this relationship.

Her work is part of the ongoing Memory in Diabetes (MIND) project, a sub-study of the Action to Control Cardiovascular Risk in Diabetes (ACCORD) trial.

First Step Towards New Treatments

"Our results send an important message to the public," says Dr. Cukierman-Yaffe. "We have shown conclusively that there is a relationship between diabetes and cognitive dysfunction. This should be known by diabetics and their doctors. Knowledge is the first step towards action.

"Intact thinking is essential for managing the disease," Dr. Cukierman-Yaffe adds.

Clinicians today work with the patient to prevent complications of diabetes. Early detection of visual problems, for example, can be treated with laser surgery if diagnosed early enough, and blindness can be avoided in some cases.

"Today, diabetes cannot be cured. We can however delay or prevent many of its complications," says Dr. Cukierman-Yaffe. "Diagnosing cognitive dysfunction at a pre-clinical stage is the first step in finding new treatment options."

A New Association with Poor Cognitive Performance

Dr. Cukierman-Yaffe's work opens a new opportunity for researchers to better understand the cognitive risks associated with diabetes and dysglycemia. She points out that diabetes, unlike other chronic disease states, is a complex disease to manage and one that requires intact cognition in the patient. As the mind starts deteriorating, so does the patient's ability to treat the diabetes effectively. Disease management can then spiral out of control.

Findings in her recent study show that in people with type 2 diabetes, higher levels of haemoglobin A1C (a measure of average blood glucose) are significantly associated with poorer performance on three cognitive tasks which require memory, speed and ability to manage multiple tasks at the same time. A higher A1C level was also associated with a lower score on a test of global cognitive function.

The results of the study suggest that lowering A1C levels could slow the accelerated rate of cognitive decline experienced by people with diabetes. However prospective studies and clinical trials are needed in

order to prove this. The ongoing ACCORD-MIND study, in which study patients are followed over time and are tested three times during the trial will test the hypothesis that lowering A1C could result in improved cognitive function.

Source: American Friends of Tel Aviv University

Citation: New research links diabetes to cognitive deterioration (2009, March 5) retrieved 18 April 2024 from

<https://medicalxpress.com/news/2009-03-links-diabetes-cognitive-deterioration.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.