T2DM-linked hypoglycemia doesn't impact brain pathology

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(HealthDay)—Hypoglycemia related to type 2 diabetes mellitus (T2DM) doesn't appear to impact brain pathology, according to a study published online Sept. 29 in *Diabetes Care*.

Zi Zhang, M.D., from the University of Pennsylvania in Philadelphia, and colleagues examined the effect of symptomatic severe hypoglycemia on brain structure in a cohort of 503 patients with T2DM. Participants underwent brain magnetic resonance imaging (MRI) at baseline and 40 months. An automated computer algorithm was used to calculate total brain volume (TBV) and abnormal white matter (AWM) volume. To identify signs of local disease, MRI scans of hypoglycemic participants were also reviewed.

During the 40-month follow-up, the researchers found that 28 of the

participants had a least one symptomatic severe hypoglycemia episode (hypoglycemia requiring assistance [HA]). Participants with HA had marginally significant less atrophy (less decrease in TBV) from baseline to 40 months compared to those without HA (−9.55 versus −15.38; P = 0.051); in addition, they had no significant increase in AWM volume (2.06 versus 1.84; P = 0.247). On MRI scans for hypoglycemic participants there were no unexpected local signal changes or volume loss.

"Our study suggests that hypoglycemia related to T2DM treatment may not accentuate brain pathology, specifically brain atrophy or white matter abnormalities," the authors write.

More information: Abstract
Full Text (subscription or payment may be required)