Abdominal fat at middle age associated with greater risk of dementia

EurekAlert

Researchers from Boston University School of Medicine determined that excess abdominal fat places otherwise healthy, middle-aged people at risk for dementia later in life. Preliminary findings suggest a relationship between obesity and dementia that could lead to promising prevention strategies in the future. Results of this study are published early online in *Annals of Neurology*, a journal of the American Neurological Association.

A 2005 World Health Organization (WHO) report estimated that 24.3 million people have some form of dementia, with 4.6 million new cases annually. Individuals with dementia exhibit a decline in short-term and long-term memory, language processing, problem solving capabilities, and other cognitive function. Clinical diagnosis of dementia is made when two or more brain functions are significantly impaired. Symptoms of dementia can be attributed to irreversible causes such Alzheimer's disease, vascular dementia, and Huntington's disease, or caused by treatable conditions such as brain tumor, medication reaction, or metabolic issues.

For the current study, Sudha Seshadri, M.D. and colleagues recruited participants from the Framingham Heart Study Offspring Cohort. The sample included 733 community participants who had a mean age of 60 years with roughly 70% of the study group comprised of women. Researchers examined the association between Body Mass Index (BMI), waist circumference, waist to hip ratio, CT-based measures of abdominal fat, with MRI measures of total brain volume (TCBV), temporal horn volume (THV), white matter hyperintensity volume (WMHV) and brain infarcts in the middle-aged participants.

"Our results confirm the inverse association of increasing BMI with lower brain volumes in older adults and with younger, middle-aged adults and extends the findings to a much larger study sample," noted Dr. Seshadri. Prior studies were conducted in cohorts with less than 300 participants and the current study includes over 700 individuals.

"More importantly our data suggests a stronger connection between central obesity, particularly the visceral fat component of abdominal obesity, and risk of dementia and Alzheimer's disease," Dr. Seshadri added. The research showed the association between VAT and TCBV was most robust and was also independent of BMI and insulin resistance. Researchers did not observe a statistically significant correlation between CT-based abdominal fat measures and THV, WMHV or BI.

"Our findings, while preliminary, provide greater understanding of the mechanisms underlying the link between obesity and dementia," concluded Dr. Seshadri. "Further studies will add to our knowledge and offer important methods of

prevention."

SOURCE [1]

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