MULTI-DOMAIN INTERVENTION FOR ALZHEIMER'S PREVENTION: A FOLLOW-UP STUDY

San Diego, California, USA. December 5, 2019. The Multi-domain Alzheimer Prevention Trial (MAPT) was a three-year intervention trial designed to assess whether a combined intervention of cognitive stimulation, physical activity, nutrition, and supplementation with omega-3 polyunsaturated fatty acids could slow cognitive decline in a population of older adults at risk for Alzheimer's disease (AD). The results of the study, published in 2017, failed to demonstrate significant slowing of cognitive decline during the 3-year study period, although subgroup analyses suggested possible benefits for individuals with elevated brain amyloid and those who were carriers of the APOE4 gene. Both of these markers are associated with an increased risk of developing AD. Today, Bruno Vellas, MD, PhD of the University Hospital of Toulouse and principle investigator of MAPT presented data from two years of observational follow-up.

MAPT randomized 1680 participants to one of four arms: placebo, omega-3 supplementation only, placebo plus multidomain intervention, or omega-3 plus multidomain intervention. The primary outcome measure was change from baseline on a composite assessment of episodic memory, orientation, executive function, and verbal fluency. Assessments made at 6, 12, 24, and 36 months, with follow-up assessments at 48 and 60 months. More than three-quarters of randomized participants completed the 36-month study, and more than half (56%) completed the 5-year visit.

The follow-up study failed to detect statistically significant long-term benefits from the intervention, said Vellas, although a trend was seen for the group that received the multidomain intervention plus omega-3 supplementation. Moreover, subgroup analysis suggests that the impact of multi-domain intervention plus omega 3 continued to be strongest in APOE4 carriers and those that had evidence of amyloid pathology in their brains.

Possible reasons for the negative results from this study include an intervention that was not sufficiently intense or a study period that was too short, said Vellas. He and his team plan future studies to further investigate the association between amyloid positivity and responsiveness to a multidomain intervention plus omega 3 as well as targeting those with ApoE4 genotype. They also started a study of individuals with low blood levels of DHA (docosahexaenoic acid), an omega-3 fatty acid that has been associated with an elevated risk of cognitive decline.

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