Researchers suggest dual gait testing as early predictor of dementia

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"Finding methods to detect dementia early is vital to our ability to slow or halt the progression of the disease," says Dr. Montero-Odasso. The study, funded by the Canadian Institutes of Health Research, followed participants for six years and included bi-annual visits. Researchers asked participants to walk while simultaneously performing a cognitively demanding task, such as counting backwards or naming animals. Those individuals with MCI that slow down more than 20 per cent while performing a cognitively demanding task are at a higher risk of progressing to dementia.

"While walking has long been considered an automatic motor task, emerging evidence suggests cognitive function plays a key role in the control of walking, avoidance of obstacles and maintenance of navigation," says Dr. Montero-Odasso. "We believe that gait, as a complex brain-motor task, provides a golden window of opportunity to see brain function."

The "gait cost," or speed at which participants completed a single task (walking) versus a dual-task, was higher in those MCI individuals with worse episodic memory and who struggle with executive functions such as attention keeping and time management.

"Our results reveal a 'motor signature' of cognitive impairment that can be used to predict dementia," adds Dr. Montero-Odasso. "It is conceivable that we will be able to diagnose Alzheimer's disease and other dementias before people even have significant memory loss. Our hope is to combine these methods with promising new medications to slow or halt the progression of MCI to dementia."

The study, "Association of Dual-Task Gait with Incident Dementia in Mild Cognitive Impairment", was published in the journal, Jama Neurology.

More information: Manuel M. Montero-Odasso et al. Association of Dual-Task Gait With Incident

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