

Study finds cerebrovascular disease to be major determinant of psychosis in patients with Alzheimer's

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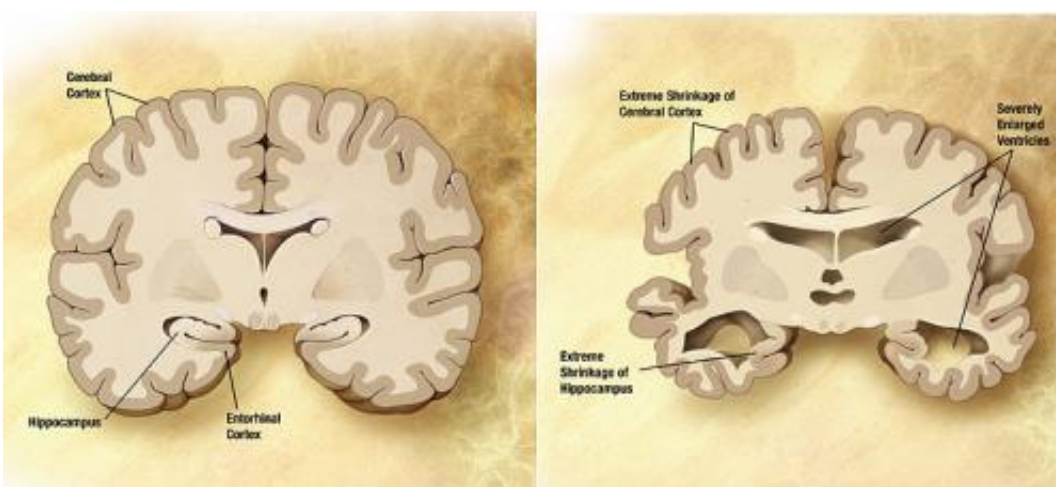


Diagram of the brain of a person with Alzheimer's Disease. Credit: Wikipedia/public domain.

About half of all patients with Alzheimer's disease develop symptoms of psychosis, such as delusions or hallucinations.

But the pathological mechanisms that underlie [psychotic symptoms](#) are unclear, limiting the ability to manage and treat them. Some studies have suggested they are related to the underlying causes of Alzheimer's disease such as the protein deposits found in the brains of Alzheimer's patients, but others found no correlation.

A study published today in the *Journal of Alzheimer's Disease* found that [cerebrovascular disease](#) is a major determinant of psychosis in people with Alzheimer's disease. Cerebrovascular disease is a group of conditions that restrict the circulation of blood to the brain.

Using data from the National Alzheimer's Coordinating Centre database collected from 29 Alzheimer's disease centres in the United States between 2005 and 2012, researchers led by Dr. Corinne Fischer, a psychiatrist and researcher at St. Michael's Hospital, analyzed autopsy data from 1,073 people.

Of the 890 people who had been clinically diagnosed with Alzheimer's while they were alive, the people most likely to be psychotic were those whose autopsies showed they had more physical signs of Alzheimer's such as neuritic plaques (protein deposits) and neurofibrillary tangles (twisted fibers found inside brain cells).

But when they looked at the 728 people whose autopsies confirmed they had Alzheimer's, those with psychosis did not show increased physical evidence of Alzheimer's disease. Alzheimer's can only be confirmed through an autopsy, so some patients in the clinically diagnosed group had been misdiagnosed with Alzheimer's.

In both groups of patients, psychosis correlated significantly with Lewy bodies, abnormal protein aggregates found in nerve cells of patients with Parkinson's disease. This was not an unexpected finding since psychosis is prominent when dementia accompanies Parkinson's disease.

What was entirely unexpected was the prominent role in [psychosis](#) of [vascular risk factors](#) (hypertension, diabetes, age at quitting smoking) and cerebral injuries related to small vessel disease,

About 19 per cent of people with Alzheimer's who live in the

community (rather than in institutions) are thought to have delusions and 14 per cent have hallucinations. Psychotic symptoms are significant in Alzheimer's [patients](#) because they have been shown to be associated with increased burden on caregivers, increased functional decline and more rapid progression of the disease.

Provided by St. Michael's Hospital

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