Medical Xpress

Dementia and COVID-19: Determinants of infection and mortality

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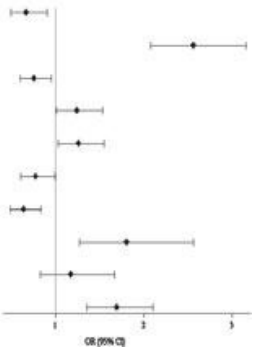
Patient characteristics	OR (95% CI)		p-value
Epidemic phase (second vs first)	0,67	(0,49 - 0,90)	0,009
Symptoms at the time of diagnosis	2,56	(2,08 - 3,16)	<0.001
Acetylcholinesterase inhibitors	0,75	(0,59 - 0,95)	0,018
Antibacterial for systemic use	1,24	(1,01 - 1,53)	0,043
Antipsychotics	1,26	(1,03 - 1,55)	0,025
Residence (other provinces of the Lazio region vs metropolitan area of Rome)	0,77	(0,60 - 1,00)	0,096
Residence (province of Rome vs metropolitan area of Rome)	0,64	(0,49 - 0,84)	0,003
Age (≥85 vs 65-74)	1,81	(1,27 - 2,56)	0,001
Age (75-84 vs 65-74)	1,17	(0,83 - 1,66)	0,369
Gender (males)	1,69	(1,35 - 2,11)	<0.001



Factors associated with 60-day mortality in dementia patients infected with SARS-CoV-2. Credit: *Journal of Alzheimer's Disease* (2022). DOI: 10.3233/JAD-220369

The elderly population has been hit with some of the worst effects of the COVID 19 pandemic, with a considerable mortality burden in particular among those who were living in long term care facilities. Several studies have identified dementia as an important risk factor for SARS-CoV2 infection and COVID-19 mortality.

A recent study, published in the *Journal of Alzheimer's Disease*, using a population-based approach, has identified clinical and demographic characteristics affecting the risk of SARS-CoV-2 infection and severity among patients with dementia.

Dr. Silvia Cascini, senior researcher at the Department of Epidemiology of the Lazio Regional Health Service—Rome, Italy—conducted the study using routinely collected, high quality data coming from regional health administrative databases. This data source, more and more used in the field of epidemiology, has been integrated with information registered on the ad hoc platform implemented during the COVID-19 outbreak for surveillance purposes.

Dr. Cascini says that "previous studies reported that people with dementia are more likely to contract SARS-CoV-2 infection than people without and that dementia is in itself a risk factor for COVID-19-related mortality. However, there was still little knowledge about individual factors increasing the risk of SARS-CoV-2 infection and mortality in this particularly fragile population."

The study included 37,729 adults with dementia aged 65+ and was carried out in the Lazio region, located in central Italy, including Rome, and with about 6,000,000 inhabitants. During 2019, 2548 (about 7%) of individual with dementia get the infection and 626 died within 60 days from the infection. Dr. Cascini believes that this is the first population-based cohort study including a large sample size addressing the determinants of SARS CoV-2 infection and death from COVID-19 among patients with dementia.

The research found that the risk of infection and mortality is markedly higher in people with dementia as compared with general elderly population. A high burden of comorbidities, such as blood, cerebrovascular and respiratory diseases, anxiety, history of hip fracture, and antipsychotic use have been identified as risk factors for both infection and mortality, while severity of symptoms at diagnosis and male gender are specifically associated with an increased risk of COVID-19-related death.

"Our analysis," Dr. Nera Agabiti says, "revealed a strong association between presence of symptoms at diagnosis and short-term mortality. We have to keep in mind that although much has been learned about how to prevent the infection, elderly with dementia require to be adequately monitored by both physicians and caregivers to minimize exposure to the virus, recognize timely signs/symptoms of COVID-19, and ensure proper disease management."

Considering that the onset of COVID-19 disease in individuals with dementia often occurs with non-respiratory symptoms, such as delirium or functional decline, the authors underlined the need of close monitoring of dementia patients with suspected COVID-19, for early diagnosis and treatment.

"Since the pandemic continues to influence our lives and threaten population health, in particular that of frail people," Dr. Anna Maria Bargagli concluded. "The identification of risk factors for SARS-CoV-2 infection and mortality in patients with dementia appeared to be a key aspect to support clinical decisions and public health interventions."

More information: Silvia Cascini et al, Incidence and Outcomes of SARS-CoV-2 Infection in Older Adults Living with Dementia: A Population-Based Cohort Study, *Journal of Alzheimer's Disease* (2022). DOI: 10.3233/JAD-220369

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