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Dementia and Depression: A Glance of Neuropsychiatry

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ABSTRACT

Dementia has a complex disease course and one of them can affect the psychology of the sufferer. People with dementia tend to experience stress and anxiety symptoms due to the limitations they experience. This article will provide a theoretical overview of the relationship between the two in general and theoretically so that it can be understood that the two are a unity in the neuropsychiatric aspect.

1. Introduction

Increases in life expectancy are directly proportionate to increases in the old population, resulting in an increase in neuropsychiatric illnesses among the elderly. Neuropsychiatric diseases are more likely to occur in those above the age of 80.^{1,2} Given the present and anticipated expansion of the elderly population³, a greater knowledge of the relationship between depression and dementia risk is critical, particularly in terms of treatment and prevention. However, there are numerous obstacles to this understanding. Major depressive disorder (MDD) is frequent in dementia patients, with up to 20% of people with Alzheimer's disease (AD) and up to 50% of patients with vascular dementia suffering from it (VaD).⁴⁻⁶ Although depression and dementia are regarded separate clinical entities, they have several characteristics, such as attention and working memory impairment, changes in sleep patterns, and a

decrease in social and vocational function.⁷ Indeed, the term "pseudodementia" emphasizes how the line between depression and dementia may be hazy.¹⁻⁴

Depression and dementia might be linked in a variety of ways. For starters, depressed symptoms are common among dementia sufferers. Second, depression might be a result of early cognitive impairment. Third, depression can impede cognitive function, resulting in the appearance of pseudodementia. Finally, depression may be a risk factor for dementia or an early indication. In this essay, we attempt to offer a theoretical and broad review of the link between depression and dementia.

Dementia and depression, an understanding of both

The most prevalent mental syndromes among elderly people are dementia and depression. Although

early identification of underlying causes and therapy are critical, accurate differential diagnosis and categorization (classification) remain clinically difficult. Dementia is a condition characterized by loss in cognitive function (the capacity to process thoughts) that is more severe than what would be anticipated with normal aging. Memory, cognition, orientation, understanding, computation, learning capacity, language, and judgment are all affected. The state of consciousness is unaffected. Deterioration in emotional regulation, social behavior, or motivation is frequently associated with, and occasionally preceded by, cognitive impairment.⁵

Alzheimer's disease (AD) and Parkinson's disease (PD) are the most prevalent underlying causes of dementia in the elderly. Vascular dementia, mixed dementia, dementia with Lewy bodies, dementia in Parkinson's disease¹⁶, and frontotemporal dementia are all examples of dementia. Depressive symptoms have been recorded in 30-50 percent of people with AD dementia, with the prodromal stage being the most frequent. Overt severe depression can be detected in more than 10% of Alzheimer's patients, usually in the early to moderately impaired stage, and in up to 50% of vascular dementia patients.⁶ Furthermore, nearly half of people with Lewy body dementia have depressed symptoms.⁷

Depression is characterized by a lack of interest or pleasure, sorrow, feelings of shame or inferiority, sleep or hunger problems, fatigue, poor concentration, and a desire to terminate one's life. Depression can last for months or years, interfering with a person's ability to perform at work, school, or in everyday life.⁸ Depressive feelings, lack of interest and enthusiasm, and decreased energy leading to increased tiredness and decreased activity are the most common signs of depression.^{9,10}

In 2017, it is projected that 200 million individuals worldwide suffer from anxiety, accounting for roughly 3.6 percent of the global population; however, 322 million people suffer from depression, accounting for around 4.4 percent of the global population.¹² To date, the majority of published studies have focused on late-

life depression – that is, depression in people over 60 years old – and the risk of dementia, as well as the link between depression and dementia; in contrast, only a few studies have been conducted in people under 60 years old with depression. Because (I) depression onset is highly variable, (II) both young adulthood and middle age are associated with a high incidence of depression, and (III) dementia has a long asymptomatic preclinical phase, examining depression earlier in life may provide an opportunity to investigate whether depression is a risk factor for dementia many years before the onset of dementia. In any event, the link between late-life depression and dementia should be recognized, as it may allow for a more in-depth examination of depression as part of the prodromal stage of dementia.¹³

Dementia caused by depression or dementia causing depression?

If you have a positive history of depression when you were younger, your chances of having dementia later in life rise by double. A monotonic rise in the risk of dementia can be detected in the context of repeated depressive illnesses, with an estimated 14 percent increase with each episode. Although the current evidence is mixed, it is reasonable to conclude that late-life depression increases the chance of dementia significantly. Depression can be a risk factor, a prodrome, or a symptom of dementia in this situation.¹⁴

The most well-known mechanism that has been proposed to link depression and dementia is a mechanistic relationship between depression-related processes and dementia-specific neuropathology in vascular disease. The greatest evidence between depression and dementia is vascular disease. The vascular depression dementia hypothesis is primarily responsible for this connection. Some geriatric depression syndromes are predisposed to, precipitated by, or perpetuated by cerebrovascular illness, according to this theory. However, it is disputed whether vascular illness or vascular lesions cause or contribute to depression, as each condition is linked

to an increased chance of acquiring the other.¹⁵⁻¹⁷

It has been discovered that vascular illness contributes to the clinical presentation of dementia symptoms, which supports the vascular depression dementia theory. Ischemic injury to the frontostriatal brain areas, in particular, can result in severe cognitive impairments. Finally, ischemia damage to frontostriatal brain areas might explain executive function, psychomotor sluggishness, and treatment resistance seen in late-life depression. This implies that ischemic structural alterations in the brain are a shared etiologic component in both depression and the cognitive impairment that comes with it.^{18,19}

Although there is no definitive answer as to whether depression is a prodrome or risk factor for dementia, the overall relationship between depression and dementia risk implies a substantial correlation. If a patient comes with depression or depressed symptoms, especially in later life, cognitive deficit assessment should be included in the patient's management or therapeutic care. Furthermore, research on earlier-life depression show that older individuals who have already experienced depression should be actively watched for both recurrent depression and cognitive impairment. Treatment of depression in older individuals (pharmacological, behavioral, or other modalities) has been demonstrated in certain studies to enhance cognition, resulting in better memory and other cognitive function and may decrease dementia-related pathophysiological changes, although some studies have found that cognitive deficits remain or worsen following effective depression treatment.²⁰

2. Conclusion

Dementia and depression: which one affects or follows the other is still a point of contention. Although the "vascular depression dementia theory" has been proposed as a way of defining the link between the two. More longitudinal studies across the lifetime are needed to better understand the link between depression and depressed symptoms and the risk of dementia in later life.

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