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Mental Health and Cognitive Care for Successful Aging with HIV

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Abstract

Purpose of the article: Globally, an estimated 4.2 million people above the age of 50 now have diagnosis of HIV (Human Immunodeficiency Virus) infection. Patients with HIV can now survive well into old age. Aging with HIV has been associated with medical illness however neuropsychiatric symptoms including cognitive decline and behavioral dysregulation has been directly associated with aging and having HIV. The article will talk about common neuropsychiatric diagnosis with HIV and discuss some interventions that may be used for successful aging with HIV.

Findings: A detailed literature review using indexed peer reviewed literature using databases such as Medline, PubMed and Cochrane reviews show that untreated HIV illness over a long period of time can both cause both cognitive and behavioral changes as well as precipitate underlying existing illnesses. All providers are encouraged to begin treatment with Highly Active Antiretroviral Therapy (HAART). Early screening for both behavioral and cognitive disorders is encouraged and timely referrals to mental health professionals is of utmost importance.

Conclusion: Persons with HIV now have increased longevity given newer and more innovative treatment with anti-retroviral treatment (ART). However, persons with HIV are at increased risk for both neurological and psychiatric illness. Early detection, assessment and treatment are key to ensure aging successfully. A collaborative multidisciplinary team comprising of individuals from infectious diseases, mental health, social work and nursing is essential for optimal neuropsychiatric health in older persons with HIV.

Keywords: HIV, Aging, Behavioral Health, Neurocognitive disorder, ARV, HAART

Epidemiology

Globally, an estimate of 4.2 million people above the age of 50 now have diagnosis of HIV (Human Immunodeficiency Virus) infection. Approximately 1.2 million people have been diagnosed with HIV in the United States [1]. Of note HIV continues to affect minority groups such as African American or Latinx persons. Gay and bisexual men or men who engage in sexual contact with other men continue to be at higher risk [2,3]. Traditionally, healthy adults are considered older after the age of 65- however the CDC (Center for Disease Protection) defines "older" HIV patients as patients above the age of 50 [2].

Of note the number of older adults living in the United States in 2019, were approximately 54 million. Approximately 1 in 7 persons living in America is considered an older adult. However, projections by the CDC approximate that about 25% of the population in 2040 will be 65 and older [3].

A significant percentage of new cases with HIV are being diagnosed in persons (approximately 15-20% are being diagnosed in people 55 and older. People who carry HIV are 1.44 times more likely to have behavioral health issues than people without HIV infection [4].

HIV and Aging

Aging is a consistent process that occurs biologically and involves changes at the cellular level. There is an overall decrease in normal physiological reserves [5]. HIV is known to increase the speed of aging- akin to increased loss of reserves. It is known that given increased speed of aging most persons with HIV are vulnerable to both behavioral as well neurological changes at a higher and more increased rate as compared to general public [6].

Given the persons with HIV experience cognitive dysfunction

along with immunosuppression, there is increased medication non adherence as a result of the same [7].

As people get older there is known increased risk for stroke, myocardial infarctions along with diabetes and hypertension [8]. Given that this become accelerated in persons with HIV, there is a larger burden of both medical illness as well as mental illness directly due to the burden of multiple medical illnesses [9-11].

Several studies on aging have shown that above the age of 50-persons with HIV experience both higher rates of depression and cognitive dysfunction as compared to adults without HIV at age 50. This appears to be related to chronic inflammation which is directly related to the course and outcome of HIV as a chronic disease [12,13].

Common Neuropsychiatric Diagnosis in Older Adults with HIV

A. Neurocognitive Disorders

In the late 80's, HIV associated neurocognitive disorders was noted in a significant number given that ART had not been as widely available. Significant cognitive dysfunction was notable especially in end stage disease [14]. The initial term that had been used was "AIDS Dementia" [15].

The Frascati Panel has come up with a new system of classification-based on verbal skills, memory, executive dysfunction, motor skills, and processing speed. The focus is primarily on HIV infection related neurocognitive disorder. They then subdivide into 3 categories as below based on neuropsychological testing [16].

I. Asymptomatic neurocognitive impairment (ANI), which includes impairment in at least two cognitive domains, at least one standard deviation below the mean in testing and no impairment with daily functioning.

II. Mild neurocognitive disorder (MND) in which neuropsychological testing results as above with at least mild interference with daily functioning.

III. HIV-associated dementia (HAD)-primarily impairment in two cognitive domains and two standard deviations below normal in neuropsychological testing.

B. Depressive Disorders

A significant number of adults with HIV present with mood disorders- almost 30-45% are diagnosed with a form of depressive disorder. It is estimated that the current rate of a formal diagnosis of major depressive disorder occurs almost in 4.7% of adults hence this number is significantly above [17].

Risk factors include being isolated, carrying the stigma of HIV, and overall sense of demoralization given that this is a chronic medical illness. Demoralization often leads to low self-esteem and can lead the pathway to depression which can present with anhedonia and apathy in this population. Lack of motivation and interest appear to be prominent symptoms [18,19].

Of note-some physical symptoms may overlap with symptoms of depression including loss of appetite, fatigue, and neurovegetative slowing. It becomes important to distinguish between depression and HIV related delirium and neurocognitive impairments. Mood and cognitive disorder can co-exist. In Older adults other medical and neurological co-morbidities come into play hence symptoms can be exaggerated [20,21].

C. Bipolar Disorders

An important feature of the past used to be "secondary mania"-rather preceding the era of ART patients with CD4 count below 200 would present with manic symptoms such as mood lability, irritability, and impulsivity. This was noted in the older population who carried the infection for a prolonged period of time [22].

If there is preexisting Bipolar Disorder -there is increased risk of impulsive behavior which can increase both sexual risk as well as substance use that can increase likelihood for sexually transmitted disease. Of note a clinic feature in older adults can be neurocognitive symptoms and irritable mood making it hard to distinguish from Unipolar Depression [23].

D. Psychotic Disorders

Psychotic Disorders can be subdivided into two categories-in older adults having a preexisting psychotic illness and then getting illness and having psychotic symptoms. New onset psychosis can be seen in full blown Acute Immunodeficiency Syndrome (AIDS) with low CD4 counts (Counts below 200) [24].

Studies have shown that patients with chronic psychotic illness and HIV infection have overall lower rates of survival [25]. Some medications associated with HIV treatment like interferon and efavirenz can also precipitate psychotic symptoms [26].

E. Anxiety Disorders

It is said that patients with HIV infection have higher rates of generalized anxiety disorder and panic disorder however there is limited clinical evidence showing the same. However, women diagnosed with HIV have much higher rates of anxiety compared to women without HIV- this has not been explored in depth in medical literature and this is not specific to older women [27].

Screening for Behavioral and Cognitive Disorders while Aging

Clinicians working with older adults often fail to screen for sexually transmitted diseases. Sexual history must be screened for in older adults especially when they present with new onset mood or psychotic disorders. New onset sexually transmitted diseases such as HIV can present directly with mood or cognitive changes in older persons hence inquiring about sexual history is of utmost importance [28,29]. Working closely with an infectious disease specialist would be optimal especially when infection is detected. Ideally, nursing staff that is familiar with working with older adults can be part of the larger education circle for the older adult and their families.

Given the prevalence of HIV in the 80's and without access to adequate treatment or prevention, there exist a number of older gay men with HIV and increased susceptibility to cognitive changes especially untreated. Testing for HIV when there are early cognitive changes are a must, given that often HIV is not tested for in older adults routinely and there may be underlying infection that is dormant over years [30].

Prevention and Treatment

A key aspect of aging with HIV is screening for cognition. Ideally as soon as an older adult with HIV comes of age at 50- screening for cognitive changes is key. A simple screening exam as the MMSE (Mini mental status exam) [31] or MoCA- (The Montreal Cognitive Assessment) may suffice [32]. If new onset mood or anxiety symptoms are seen-early consultation with mental health services can be of assistance to maintaining healthy aging.

A key principle also involves screening routinely for mood and psychotic disorders in the older age population with HIV. If there are new onset mood or psychotic symptoms, co screening for cognitive disorders is vital as often mood changes can precede cognitive changes in many cases [30].

If there are untreated individuals or individuals who have not been started on ART, it is imperative to start them on the same.

Conclusion

Persons with HIV now have increased longevity given newer and more innovative treatment with ART. However, persons with HIV are at increased risk for both neurological and psychiatric illness. Early detection, assessment, and treatment are key to ensure aging successfully. A limitation of the article is that it does not explore more specific screening and prevention methods for minority persons or persons of the LGBTQ community. A collaborative multidisciplinary team comprising of individuals from infectious diseases, mental health, social work and nursing is essential for optimal neuropsychiatric health in older persons with HIV [14].

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