

HIV AND MENTAL HEALTH

HIV is changing the practice of medicine in many ways and the management of mental health is no exception.

JANE SAUNDERS

MB ChB, DCH, FCPsych, MMed

Senior Consultant

Department of Psychiatry and Mental Health

University of Cape Town

Jane Saunders is a senior consultant in the Department of Psychiatry and Mental Health at UCT. Her interests include neuropsychiatry, psychogeriatrics and bioethics. She is principal investigator of the UCT/PGWC Neuropsychiatric HIV Project.

HIV places a huge burden on both the individual and society. It is an illness characterised by loss in multiple domains with an impact extending beyond the direct medical consequences. Mental illness and distress associated with HIV are very common. It is important to consider HIV-associated psychiatric illness as a possibility in all clinical presentations where patients exhibit stigmata of AIDS or are HIV-positive.

HIV infection results in psychiatric disease through a variety of mechanisms:

- The stress of the diagnosis may precipitate a psychiatric illness, such as a major depressive episode or an adjustment disorder. There is some evidence that depression and substance abuse may accelerate the progression of HIV.
- A person with a pre-existing psychiatric illness may be at higher risk of becoming HIV-positive.
- The HI virus may affect the brain directly.
- Complications of the immune-compromised state (e.g. infections, malignancies, hypoxia, and septicaemia) may present with psychiatric illness, such as delirium.
- Medications, such as efavirenz, may cause mania and depression and isoniazid may cause psychosis.
- Psychiatric illness is often a combination of all of the above mechanisms.

CLINICAL PRESENTATIONS

Depression (Table I)

Depression is a common complication of HIV that can occur at any time in the illness. It is often difficult to diagnose in the advanced stages of the disease as symptoms such as loss of weight, loss of appetite, lethargy and poor sleep are common to both depression and to other factors related to AIDS. It is useful to look for non-somatic features, such as poor self-esteem, tearfulness and deterioration in otherwise supportive relationships. There is a significantly increased risk of suicide, particularly after receiving the news of being HIV-positive, after the development of AIDS and following social stigmatisation and rejection as a result of being HIV-positive. Co-existing depression has a serious negative impact on patients' ability to adhere to treatment.

Mania and psychoses

Mania and HIV psychosis are less common than depression, but are important as they are AIDS-defining illnesses and are indications for antiretroviral treatment. They may be difficult to distinguish from schizophreniform psychoses. Most patients who present with HIV-related psychosis also have features of cognitive impairment and, if untreated, develop HIV-associated dementia. Useful indicators are the absence of a family or personal history, an atypical fluctuating clinical picture (where psychotic and affective symptoms fluctuate over days or weeks) and other stigmata of advancing disease. Clinical staging of the HIV disease, together with appropriate special investigations such as a CT scan and lumbar puncture are frequently required to differentiate possible opportunistic infections causing psychosis as opposed to medication or direct CNS invasion. HIV-associated psychosis and mania respond well to antiretroviral treatment.

HIV-associated dementia (HAD)/AIDS encephalopathy

Mild cognitive symptoms in HIV-positive people are relatively common and have been termed the HIV-associated minor cognitive/motor disorder. The symptoms are frequently

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Table I. **Diagnostic features of depression**

I. Low mood / sadness: 'Do you feel sad or like crying for no reason?'.....	<input type="checkbox"/>
II. Loss of interest or pleasure: 'As a person there are things that you enjoy doing, such as listening to music or going out with friends, do you find that you no longer enjoy these things?'.....	<input type="checkbox"/>
III. Decreased energy and / or increased fatigue: 'Do you feel exhausted or tired even when you are not working hard?'.....	<input type="checkbox"/>
If YES to any of the above, continue below	
1. Sleep disturbance: 'How are you sleeping at the moment?'.....	<input type="checkbox"/>
2. Appetite loss / increase: 'How are you eating at the moment? Have you lost interest in food?'.....	<input type="checkbox"/>
3. Concentration difficulty: 'Does your mind have difficulty working? Do you find that recently you forget things easily?'	<input type="checkbox"/>
4. Psychomotor retardation or agitation: 'Do you feel that you are slowed down and take longer to do things?'.....	<input type="checkbox"/>
5. Decreased libido: 'Have you lost interest in sex?'.....	<input type="checkbox"/>
6. Loss of self-confidence or self-esteem: 'Do you feel less worthy than or beneath other people?'.....	<input type="checkbox"/>
7. Thoughts of death or suicide: 'Have you had thoughts about ending your life?'.....	<input type="checkbox"/>
8. Feelings of guilt: 'How are other people feeling about you? Responding to you? What do you feel about this? Is it your fault?'.....	<input type="checkbox"/>
Summing up	
Positive to I, II or III and at least 5 positive from 1 to 8. All occurring most of the time for 2 weeks or more is an indication of <i>depression</i> .	

dismissed as being associated with the stress of living with HIV.

HAD is much less common and is an AIDS-defining illness. Progression of HAD is that of increasingly severe cognitive deficits with decreased

cognitive and operative agility, marked slowness, abnormal movements and behavioural problems, ranging from frontal lobe symptoms to psychosis (Tables II and III). Many patients present with what initially appears to be depression. Patients

Table II. **Signs and symptoms of cognitive impairment in HAD**

Early	Late
Memory impairment (especially with verbal rote or episodic)	Severe dementia affecting multiple cognitive domains
Impaired concentration	Aphasia or mutism
Language comprehension problems	Severe frontal lobe symptoms
Conceptualisation difficulties	Severe psychomotor slowing
Problem-solving difficulties	Distractibility
Visuospatial constructional deficits	Disorientation
Motor slowing or impairment in coordination	
Mental tracking difficulties	
Mild frontal lobe symptoms	
Handwriting and fine motor control difficulties	

Adapted from Brew *et al.*

characteristically demonstrate extremely slow response times and psychomotor retardation with a variety of movement abnormalities, including clumsiness, motor slowing, impaired coordination, myoclonus, tremor, choreiform and athetoid movements. The International HIV Dementia Scale (IHDS) has been developed as a quick screen for HAD in communities where there are education, language and cultural confounders to many of the tests originating from resource-rich countries. It has been validated in Uganda and is currently being evaluated in South Africa. HAD responds to antiretroviral treatment although responses vary depending on a number of factors including how soon treatment is started after symptoms appear.

Delirium

Delirium is very common and may be secondary to HIV itself, infections, malignancies or treatment. The mortality rate is very high and the underlying cause is often difficult to treat. Patients with HAD often present for the first time with delirium when suffering a relatively mild infection. Delirium characteristically presents with a fluctuation in levels of consciousness, deficits in attention, autonomic features and visual hallucinations. Behavioural disturbance, often worse at night, is common.

Substance misuse

In South Africa, HIV transmission through the sharing of intravenous needles is relatively uncommon. Substance use disorders, however, are common in South Africa and are associated with an increased risk of becoming HIV-positive. Co-existing substance abuse has a serious negative impact on patients' ability to adhere to treatment.

Anxiety disorders

Post-traumatic stress disorder, obsessive compulsive disorder, panic attacks and generalised anxiety disorder may all occur in HIV-positive patients and are frequently co-morbid with other psychiatric problems. The most common presentation is that

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HIV infection in the central nervous system results in vulnerability to the side-effects of all medication, particularly when patients develop AIDS.

of anxiety symptoms related to the stress of testing and living with HIV. For example, patients may admit to 'thinking too much' or being constantly tense and worried as if they are going to hear 'bad news'. Associated symptoms may include restlessness, difficulty concentrating, irritability and easy fatigue. Panic attacks may present as episodes of nausea, palpitations, sweating, trembling, chest pain, shortness of breath, dizziness or tingling associated with feelings of unreality or the fear of dying or collapsing.

Pain

Chronic pain is very common in patients with AIDS, is frequently severe and often underdiagnosed, resulting in depression, self-medication with substances, and an increased risk of suicide. It arises from the HIV infection itself, such as in a painful peripheral neuropathy or through complications of opportunistic infections, associated malignancy, or treatment.

PREVENTION

Prevention remains the only completely effective intervention in the fight against AIDS. Information about the transmission of HIV and de-

Table III. Signs and symptoms of affective/ behavioural symptoms associated with HAD

Early	Late
Apathy	Severe behavioural disinhibition or agitation
Depression	Severe depression
Anxiety	Suicidality
Mild agitation	Manic symptoms
Mild disinhibition	Delusions
Hallucinations or misperceptions	Severe hallucinations

Adapted from Brew et al.

stigmatisation of the illness is vital in effective preventive strategies. Seriously mentally ill people are at a high risk for acquiring HIV and specific interventions aimed at preventive strategies in this population group need to be developed.

TREATMENT OF MENTAL DISORDERS IN HIV-POSITIVE PATIENTS

Psychiatric disorders are often a contributory factor to poor adherence in antiretroviral therapy. These disorders include depression, substance abuse, cognitive impairment and psychosis. It is very important to provide optimal treatment of these disorders to facilitate good adherence.

Table IV. Psychotropic medications in patients with AIDS

Class of neuroleptic	Comments
Antidepressants	Avoid tricyclics Citalopram, sertraline and citalopram are well tolerated and have few side-effects Fluoxetine is not as well tolerated in advanced disease
Neuroleptics	Use very low doses as patients are very sensitive to side-effects. Avoid low-potency drugs such as chlorpromazine Newer agents are better tolerated but implicated in metabolic syndrome, as are some ARVs Avoid clozapine if possible – agranulocytosis and white cell count monitoring
Mood stabilisers	Carbamazepine is contraindicated if patient is on ARVs Lithium may be neuroprotective but toxicity is a risk Sodium valproate is controversial Gabapentin is useful for peripheral neuropathy – few drug interactions but poor mood stabiliser Lamotrigine: drug interactions, rash difficult to interpret in patients with AIDS
Benzodiazepines	Some have drug interaction problems; aggravate cognitive impairment and delirium in advanced disease; avoid if possible

General principles

All patients should have a thorough clinical assessment and drug history prior to the start of treatment to identify co-existing medical problems and possibilities for drug interactions. As a general rule, patients with early HIV disease who are physically well and not on antiretrovirals or other medication can be treated as usual. The situation becomes more complex as the disease progresses.

Pharmacodynamics

HIV infection in the central nervous system results in vulnerability to the side-effects of all medication, particularly when patients develop AIDS. Very low dosages should be used initially and they should be increased very slowly. Drug interactions are important because of the potential for additive toxicity and adverse effects. For example, selective serotonin re-uptake inhibitors (SSRIs) may exacerbate the nausea caused by some antiretrovirals; anti-psychotics and anti-emetics may share side-effect profiles, and amitriptyline used for pain in peripheral neuropathy co-administered with SSRIs can cause the serotonin syndrome. This is a syndrome caused by excessive serotonin where patients present with cognitive and behavioural symptoms, such as agitation and disorientation, autonomic symptoms such as fever, hyperhidrosis and tachycardia, and neurological symptoms such as myoclonus and hyperreflexia.

Pharmacokinetics

Most psychotropics and antiretrovirals are substrates for the hepatic

cytochrome P450 isoenzyme system and many also act as enzyme inducers or inhibitors. This is the main mechanism of drug interactions when these agents are co-administered with antiretrovirals. The co-administration of an enzyme inducer could necessitate an increase in the dose of other P450 substrates while the co-administration of an enzyme inhibitor would have the opposite effect. Other factors include changes in drug disposition and protein binding as well as some antiretroviral absorption being affected by food intake.

CONCLUSION

Mental health problems are common in HIV-positive patients. Neuropsychiatric features of HIV such as psychosis, mania and dementia are AIDS-defining illnesses and should be treated with antiretrovirals. The treatment of HIV-related mental illness is important in improving quality of life and maximising adherence to medication.

Further reading

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IN A NUTSHELL

HIV- and AIDS-related psychiatric disorders are common and a full range of clinical presentations are possible.

Medical co-morbidity is very high and both medical illness and its treatment may be implicated in any psychiatric presentation

Patients with AIDS are susceptible to side-effects of psychotropic medication – prescribing by ‘starting low and going slow’ is best.

AIDS psychosis and mania and HAD are AIDS-defining illnesses and require antiretroviral treatment.

The treatment of mental illnesses in HIV-positive people is important to enhance quality of life and maximise adherence.

SINGLE SUTURE

TOO MANY SUGARY DRINKS

According to the American of Pediatrics, many of the canned drinks sold currently are sweetened with energy-rich high-fructose corn syrup. Some drinks contain the equivalent of 150 kilocalories or 10 teaspoons of ordinary sugar. And a study in Massachusetts in 2001 showed that drinking one sugary drink a day raises the risk of a child becoming obese by 60%. So it is welcome news that the USA is trying to wean its children off sugary drinks sold in school vending machines. In May this year, USA soft drinks companies, including Coca-Cola, PepsiCo and Cadbury Schweppes, along with the American Beverage Association, volunteered to phase out drinks containing more than 100 calories per can from school vending machines by 2010. Children will instead be offered bottled water, and fruit and vegetable drinks.

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