

CLINICAL: PTSD

THE MANAGEMENT OF TRAUMA AND POST-TRAUMATIC STRESS DISORDER IN HIV-INFECTED INDIVIDUALS

Janine Pingo, MB ChB

Lentegeur Hospital, Mitchell's Plain, Cape Town

Soraya Seedat, MB ChB, FC Psych, MMed Psych (US), PhD

Department of Psychiatry, Stellenbosch University, Tygerberg, W Cape

Women are disproportionately affected by the HIV epidemic and also carry a higher burden of early childhood trauma, other life traumas (e.g. rape and partner violence) and post-traumatic stress disorder (PTSD).^{1,2} Yet PTSD and other common psychiatric disorders (e.g. depression, alcohol abuse) are commonly under-detected in HIV care settings. For many HIV-infected individuals in South Africa, HIV clinical care is the primary point at which mental illness can be identified and an intervention can be administered.³ When one considers the high prevalence of trauma and PTSD in infected patients, and its potential effects on antiretroviral therapy (ART) adherence, disease progression and quality of life, it is clear that correctly identifying and treating these conditions can significantly contribute to optimal patient care.

HIV, TRAUMA AND PTSD INTERFACE

Post-traumatic stress disorder (PTSD) is a complex psychological and physiological response to serious, life-threatening trauma. The prevalence of PTSD in HIV-infected individuals varies across studies, ranging from 30% to 64%⁴⁻⁶ depending on the various methods of assessment, sample characteristics and diagnostic criteria used. In one South African study of recently diagnosed HIV/AIDS patients ($N=149$), 14.8% met current criteria for PTSD at baseline, and 26.2% met criteria at 6-month follow-up.^{7,8} Rates of PTSD appear to be significantly higher among HIV-infected individuals than in the general population.

Many studies show that a history of trauma, particularly physical and sexual abuse, is common among HIV-positive individuals and exceeds that in the general population.⁹ In one study in the USA, 95% of the women in primary care had experienced some form of sexual abuse in their lifetime, and 83% had experienced significant physical abuse.¹⁰ Another study found that 72.5% of the participants had experienced at least two types of traumatic events during their lifetime, and 53.5% had some sexual and/or physical abuse history in their lifetime.¹¹ The association between HIV infection and trauma exposure may be causal (for example, childhood sexual abuse has been linked to higher rates of sexual and drug use risk behaviours that increase the risk of HIV) or may reflect of the concentration of

HIV infection in socio-economically deprived populations who are at high risk of trauma exposures.¹²

Traumatic life events, especially multiple traumatic events, are strongly associated with poorer treatment adherence, HIV risk behaviours, a history of alcohol abuse and depression, more hospitalisations, and faster HIV disease progression.^{9,11-14} Furthermore, there is a dose-response relationship with the odds of non-adherence to antiretroviral therapy (ART) increasing with each additional lifetime traumatic exposure.¹⁴ Prior trauma may affect adherence through a variety of pathways, including: (i) PTSD or other mental health problems (as well as substance misuse); (ii) subjective experiences of and trust in the health care system; (iii) individual coping styles and self-efficacy mechanisms; and (iv) the availability of social support.^{14,15}

ASSESSMENT OF TRAUMA AND PTSD

There are essentially three core aspects to consider in the assessment for PTSD in people living with HIV/AIDS (PLWHA): (i) identification of patients who are predisposed to the disorder (i.e. at risk); (ii) careful assessment of all traumatic events that a patient has experienced; and (iii) understanding of the diagnostic criteria for PTSD.

HIV-infected patients with PTSD can present a special challenge to the primary care physician as they com-

monly complain of vague somatic symptoms that may be the somatic expression of their disorder, be exacerbated by their PTSD, or be unrelated.¹⁶ Patients with PTSD also suffer from psychiatric co-morbidities such as depression, other anxiety disorders and substance abuse. Many patients use alcohol or drugs in an attempt to self-medicate their PTSD symptoms. In addition, patients with PTSD are at an increased risk of gastro-intestinal, cardiac, respiratory and neurological problems.¹⁷

RISK FACTORS FOR PTSD

Risk factors in both infected and uninfected individuals associated with the development of PTSD are listed in Table I.

In PLWHA, additional factors such as stigma may be contributory. For example, a study of 102 HIV-infected women that examined risk factors for PTSD symptomatology found that PTSD was associated with a higher degree of perceived stigma, more HIV-related physical symptoms, less perceived social support, more pre-HIV trauma, and more negative life events.¹⁹ Stigma was the strongest individual predictor of PTSD, which highlights its importance in assessing for PTSD co-morbidity in infected individuals.

TRAUMATIC LIFE EVENTS

PLWHA who have PTSD are typically unaware of the connection between a past traumatic experience and their current symptoms. At the same time, primary care physicians are often reluctant to ask about trauma for fear of upsetting or offending patients or because of their own discomfort around hearing patients' trauma narratives. Asking HIV-positive patients about trauma with a simple question such as 'Have you ever been physically, sexually or emotionally harmed?' may be useful in helping patients understand the relationship

between trauma and its effects (i.e. in providing psycho-education), eliciting any underlying disorder/s, and then managing patients appropriately.¹⁶

THE DSM-IV CRITERIA FOR PTSD

There are six criteria (A - F) for the diagnosis of PTSD according to the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition, text revision (DSM-IV-TR).²⁰ Criterion A defines the PTSD-qualifying event/stressor as one that involves actual or threatened death or injury and evokes a response of intense fear, horror or helplessness. Traumatic events that give rise to PTSD include childhood abuse, rape, domestic violence, violent physical assault, motor vehicle accidents, military combat, and natural and man-made disasters.²⁰ Although being given a diagnosis of a life-threatening disease such as HIV may be considered as 'traumatic', there is some controversy about whether it classifies as an event that is capable of giving rise to PTSD.^{21,22}

It is crucial to ask patients whether a traumatic experience is ongoing or in the past (e.g. 'Is this dangerous/life-threatening experience continuing in your life now?').¹⁶ This should be followed up with questions including 'Some people who have had extremely traumatic experiences develop symptoms (e.g. nightmares, sleep disturbances, flashbacks) like the one you describe', or 'Some people who have had traumatic experiences like you also have symptoms of ... [e.g. chronic pain]. Have you ever thought that there might be a connection between your traumatic experience and your symptoms?'¹⁶

Criteria B - D refer to the three symptom clusters of PTSD: intrusive recollections, avoidance/numbing, and hyper-arousal. Intrusive recollections include recurrent distressing memories and nightmares of the event, acting or feeling as if the traumatic event were recurring,

TABLE I. FACTORS ASSOCIATED WITH THE DEVELOPMENT OF PTSD¹⁸

Pre-traumatic factors

- Previous psychiatric disorder
- Female gender
- Personality (external locus of control greater than internal locus of control)
- Lower socio-economic status
- Lack of education
- Minority status/race*
- Previous trauma
- Family history of psychiatric disorders

Peri-traumatic factors

- Severity of trauma
- Perceived threat to life
- Peri-traumatic emotions
- Peri-traumatic dissociation

Post-traumatic factors

- Perceived lack of social support
- Subsequent life stress

*The effect of race/minority status has been documented primarily in US samples.

and intense psychological and physiological distress on exposure to internal or external cues that remind one of a certain aspect of the event.

Avoidance/numbing symptoms refer to avoiding thoughts, feelings, conversations, activities, people or places that arouse recollections of the trauma, inability to recall important aspects of the trauma, lack of interest or participation in significant activities, feelings of detachment from others, restricted range of affect, and a sense of a foreshortened future.

Hyper-arousal symptoms include difficulty falling or staying asleep, irritability or outbursts of anger, difficulty concentrating, hyper-vigilance, and an exaggerated startle response.

Criterion E refers to the duration of the symptoms (lasting more than 1 month), and criterion F refers to the functional significance of symptoms (whether there is clinically significant distress or impairment in social, occupational or other important areas of functioning).

Lastly, one needs to specify whether the symptoms are acute (less than 3 months) or chronic, and whether symptom onset is delayed (onset of symptoms at least 6 months after the trauma).

SCREENING

While a detailed diagnostic interview such as the Clinician Administered PTSD Checklist (CAPS) is the 'gold standard', such an interview is lengthy and may be impractical for use in primary care settings. Brief and simple-to-complete screening tools may be more feasible. The four-item Primary Care Post-Traumatic Stress Disorder screen (PC-PTSD) is one such measure that assesses symptoms specific to the core domains of PTSD.²³ The PC-PTSD asks the patient 'In your life have you ever had any experience that was so frightening, horrible or upsetting that, in the past month, you ...'

- Have had nightmares about it or thought about it when you did not want to
- Tried hard not to think about it or went out of your way to avoid situations that reminded you of it
- Were constantly on guard, watchful, or easily startled
- Felt numb or detached from others, activities or your surroundings.

Three or more 'yes' responses to these questions is highly suggestive of PTSD, requiring further evaluation of symptoms and other trauma-related problems by a mental health care practitioner if need be. A cut-off of 3 on the PC-PTSD yields a sensitivity of 78% and specificity of 87% compared with the gold-standard

CAPS.²³ The PC-PTSD is simple to administer and may be easily used in a busy clinical setting alongside the SA-MISS (see related article in this issue on common mental disorders in HIV).

MANAGEMENT OF PTSD

PLWHA who have PTSD are often fearful and highly sensitive to physical sensations (e.g. a physical examination can remind some patients of their traumatic experience), and in turn may be ambivalent about medical treatment. Being supportive, enhancing a sense of personal safety, and recommending self-care strategies (e.g. an activity that is enjoyable and self-fulfilling) can help patients manage their anxiety and reduce risk-taking and self-destructive behaviours.

In clinical practice, the majority of adults with PTSD derive most benefit from a combination of treatment approaches encompassing psychopharmacology and psychotherapy.¹⁷ The management principles discussed below are illustrated in the form of a case study (see box).

PHARMACOLOGICAL TREATMENT

Medication has been shown to be significantly more effective than placebo across all three symptom clusters in PTSD, and has also been shown to be effective in reducing co-morbid symptoms and improving quality of life.²⁴⁻³⁰ Medication should be considered from the beginning if the patient prefers it, if the symptoms are severe and persistent, if there is co-morbid depression and anxiety, and if functioning is severely disrupted. PLWHA who have PTSD may be highly sensitive to physical symptoms and to medication side-effects. Adherence may be enhanced by starting medication at low doses with gradual increases based on tolerability.

- **Selective serotonin reuptake inhibitors (SSRIs)** are the most studied medications for PTSD and are widely considered as first-line agents for this condition. In South Africa fluoxetine is easily available and can be used as a first-line agent. SSRI treatment is most helpful in the long term if it is continued for at least 12 months after remission of symptoms. More on the use of SSRIs can be found in the article on psychotropic prescribing in HIV infection.
- **If there is no response in 8 weeks**, the primary care physician should refer the patient for psychiatric care. Further indications for referral to specialised psychiatric care are shown in Table II.³¹
- **Benzodiazepines should be avoided or used with caution.** While they reduce anxiety and promote sleep, controlled trials have not shown them to be superior in efficacy to placebo; with the risk of drug dependence, benzodiazepines are not recommended.

TABLE II. WHEN TO REFER FOR SPECIALISED PSYCHIATRIC CARE

- If the patient has other serious psychiatric problems which are not improving on treatment
- If the patient has suicidal thoughts/behaviour
- If there are persistent problems with medication side-effects
- If PTSD symptoms are not responsive to an adequate trial ((8 weeks at an average therapeutic dose) of at least one medication
- If there are co-existing substance abuse problems
- If the patient is experiencing other life stressors and/or poor social support

PSYCHOLOGICAL TREATMENTS

Psychological treatments are widely used to treat PTSD as they have been shown to significantly reduce symptoms.³² All patients willing to attend should be referred for psychological treatment, depending on the available services. Trauma-focused cognitive-behavioural therapy (CBT) is recommended as it has been extensively studied in PTSD.³³ CBT consists of anxiety management (teaching patients skills to cope with stress, such as relaxation training, breathing training, assertiveness training, etc), cognitive therapy (modifying unrealistic assumptions, beliefs and automatic thoughts), and prolonged exposure therapy (learning to confront situations associated with the trauma).²⁵

SUPPORTIVE INTERVENTIONS

When a patient has recently experienced an extremely traumatic event, time should be taken to educate the patient and his or her family about acute stress reactions and PTSD, and to reassure the patient that it is normal to be upset and distressed shortly after a trauma. The family should be encouraged to talk about the traumatic event with the patient and provide the necessary support, where possible.³³ In instances of domestic violence, for example, the physician will need to assess whether reporting is required and should inform the patient of the limits of confidentiality. Involvement of social workers should be considered to ensure that ongoing abuse does not occur.

REFERENCES

1. Wyatt GE, Myers HF, Loeb TB. Women, trauma, and HIV: an overview. *AIDS Behav* 2004; 8(4): 401-403.
2. Seedat S, Stein DJ, Carey PD. Post-traumatic stress disorder in women: epidemiological and treatment issues. *CNS Drugs* 2005; 19(5): 411-427.
3. Pence BW. The impact of mental health and traumatic life experiences on antiretroviral treatment outcomes for people living with HIV/AIDS. *J Antimicrob Chemother* 2009; 63(4): 636-640.
4. Kelly B, Raphael B, Judd F, et al. Posttraumatic stress disorder in response to HIV infection. *Gen Hosp Psychiatry* 1998; 20: 345-352.
5. Martinez A, Israelski D, Walker C, Koopman C. Posttraumatic stress disorder in women attending human immunodeficiency virus outpatient clinics. *AIDS Patient Care STDs* 2002; 16(6): 283-291.
6. Safren SA, Gershuny BS, Hendriksen E. Symptoms of posttraumatic stress and death anxiety in persons with HIV and medication adherence difficulties. *AIDS Patient Care STDs* 2003; 17(12): 657-664.
7. Olley BO, Zeier MD, Seedat S, Stein DJ. Post-traumatic stress disorder among recently diagnosed patients with HIV/AIDS in South Africa. *AIDS Care* 2005; 17(5): 550-557.
8. Olley BO, Seedat S, Stein DJ. Persistence of psychiatric disorders in a cohort of HIV/AIDS patients in South Africa. *J Psychosom Res* 2006; 61: 479-484.
9. Whetten K, Reif S, Whetten R, Murphy-McMillan LK. Trauma, mental health, distrust, and stigma among HIV-positive persons: implications for effective care. *Psychosom Med* 2008; 70(5): 531-538.
10. Brady S, Gallagher D, Berger J, Vega M. Physical and sexual abuse in the lives of HIV-positive women enrolled in a primary medicine health maintenance organization. *AIDS Patient Care STDs* 2002; 16(3): 121-125.
11. Leserman J, Whetten K, Lowe K, Stangl D, Swartz M, Thielman N. How trauma, recent stressful events, and PTSD affect functional health status and health utilization in HIV-Infected patients in the South. *Psychosom Med* 2005; 67(3): 500-507.

CASE STUDY

A 26-year-old HIV-positive woman with a CD4 count of 180 cells/ μ l is referred to her local ARV clinic to initiate antiretroviral therapy. In the initial interview the HIV clinician notices that she appears to be a little anxious and withdrawn, and seems tired.

The patient says that she was diagnosed with HIV 3 years ago after she was sexually and physically abused by her boyfriend at the time. A year ago she left her family and friends in the Eastern Cape to find work in Cape Town. She has Grade 10 education, and is currently a casual employee at a fast-food restaurant and living with a friend.

The HIV clinician becomes concerned, as this patient has a history of previous trauma, comes from an impoverished background and has little social support, and enquires further about her symptoms of anxiety and tiredness. The patient says that about 2 months ago she was mugged on the way home from work, physically assaulted and threatened with a knife. Since then she's had difficulty sleeping, occasionally experiences nightmares of the event, can't recall certain aspects, feels constantly on guard, and feels as if her emotions are numbed. She has taken a number of days off work recently as she's afraid she will be mugged again, and her supervisor has already warned her that she may lose her job.

The HIV clinician makes the diagnosis of post-traumatic stress disorder, and explains the treatment options available. At the patient's request, fluoxetine 20 mg daily is prescribed and a referral is made to the clinic psychologist to initiate cognitive-behavioural therapy. The patient is also started on ARVs and warned of possible side-effects, and regular follow-up is arranged to monitor her progress.

12. Brief DJ, Bollinger AR, Vielhauer MJ, et al. HIV/AIDS treatment adherence, health outcomes and cost study group. Understanding the interface of HIV, trauma, post-traumatic stress disorder, and substance use and its implications for health outcomes. *AIDS Care* 2004; 16: suppl 1, S97-120.
13. Leserman J, Ironson G, O'Cleirigh C, Fordiani J, Balbin E. Stressful life events and adherence in HIV. *AIDS Patient Care STDs* 2008; 22(5): 403-411.
14. Mugavero M, Ostermann J, Whetten K, et al. Barriers to antiretroviral adherence: The importance of depression, abuse, and other traumatic events. *AIDS Patient Care STDs* 2006; 20(6): 418-428.
15. Olley BO, Bolajoko AJ. Psychosocial determinants of HIV-related quality of life among HIV-positive military in Nigeria. *Int J STD AIDS* 2008; 19: 94-98.

16. Nakell L. Adult post-traumatic stress disorder: screening and treating in primary care. *Primary Care* 2007; 34(3): 593-610.
17. Lecrubier Y. Posttraumatic stress disorder in primary care: a hidden diagnosis. *J Clin Psychiatry* 2004; 65: suppl 1, 49-54.
18. Bisson J. Post-traumatic stress disorder. *BMJ* 2007; 334: 789-793.
19. Katz S, Nevid JS. Risk factors associated with posttraumatic stress disorder symptomatology in HIV-infected women. *AIDS Patient Care STDs* 2005; 19(2): 110-120.
20. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)*. 4th ed., text revision. Washington, DC: American Psychiatric Press, 2000.
21. Shemesh E, Stuber ML. Posttraumatic stress disorder in medically ill patients: what is known, what needs to be determined, and why is it important? *CNS Spectrums* 2006; 11(2): 106-117.
22. Kagee A. Application of the DSM-IV criteria to the experience of living with AIDS: some concerns. *J Health Psychol* 2008; 13(8): 1008-1011.
23. Prins A, Ouimette P, Kimerling R, et al. The primary care PTSD screen (PC-PTSD): development and operating characteristics. *Primary Care Psychiatry* 2004; 9: 9-14.
24. Ipser J, Seedat S, Stein DJ. Pharmacotherapy for post-traumatic stress disorder – a systematic review and meta-analysis. *S Afr Med J* 2006; 96: 1088-1096.
25. Seedat S. Post-traumatic stress disorder in the primary care setting. *South African Family Practice* 2004; 46(6): 35-36.
26. Colibazzi T, Hsu TT, Gilmer WS. Human immunodeficiency virus and depression in primary care: A clinical review. *Prim Care Companion J Clin Psychiatry* 2006; 8(4): 201-211.
27. Asnis GM, Kohn SR, Henderson M, Brown N. SSRIs versus non-SSRIs in post-traumatic stress disorder. *Drugs* 2004; 64(4): 383-404.
28. Cruess DG, Evans DL, Repetto MJ, Gettes D, Douglas SD, Petitto JM. Prevalence, diagnosis, and pharmacological treatment of mood disorders in HIV disease. *Biol Psychiatry* 2003; 54: 307-316.
29. DeSilva KE, Le Flore DB, Marston BJ, Rimland D. Serotonin syndrome in HIV-infected individuals receiving antiretroviral therapy and fluoxetine. *AIDS* 2001; 15(10): 1281-1285.
30. Repetto MJ, Petitto JM. Psychopharmacology in HIV-infected patients. *Psychosom Med* 2008; 70: 585-592.
31. Foa EB, Davidson JRT, Frances A. The Expert Consensus Guidelines Series: Treatment of post-traumatic stress disorder. *J Clin Psychiatry* 1999; 60(16): 1-76.
32. Bisson J, Andrew M. Psychological treatment of post-traumatic stress disorder (PTSD). *Cochrane Database of Systematic Reviews* 2007, Issue 3. Art. No.: CD003388. DOI: 10.1002/14651858. CD003388.pub3.
33. Bisson JI, Ehlers A, Matthews R, Pilling S, Richards D, Turner S. Psychological treatments for chronic post-traumatic stress disorder. Systematic review and meta-analysis. *Br J Psychiatry* 2007; 190: 97-104.

