There is growing awareness that many people with HIV have experienced trauma and may develop symptoms of posttraumatic stress disorder (PTSD). PTSD may occur after exposure to a traumatic event such as rape, physical assault, mugging or robbery, or life-threatening illness. Symptoms of the disorder include re-experiencing the trauma (for example, through intrusive memories or thoughts), avoidance, emotional numbing, and hyperarousal. PTSD is often accompanied by anxiety and depression, social alienation, and mistrust of family, friends, and systems.

This article reviews the data on the prevalence of trauma and PTSD among people with HIV. In addition, it discusses the potential impact of trauma exposure and PTSD on adherence, immune function, health behaviors and health outcomes. It also discusses effective treatments for PTSD and directions for future research.

Trauma Exposure and PTSD Prevalence

Studies clearly document high rates of trauma exposure among HIV-positive individuals. In one study of HIV-positive women, researchers found that 62 percent reported exposure to at least one traumatic event in their lifetimes, which compares to 51 percent of women in the general population. Their data further suggest that HIV-positive women are three to four times more likely than women in the general population to have been exposed to traumatic events involving interpersonal violence such as sexual or physical assault.

Investigators have also documented high rates of sexual trauma among HIV-positive men. One 2002 study found that 35 percent of gay or bisexual participants had a history of sexual assault. By comparison, less than 1 percent of men in a general population survey reported a lifetime history of rape and approximately 3 percent reported a history of molestation.

The same researchers also found rates of childhood sexual abuse that were significantly higher than the general population. Both HIV-positive men and women reported repeated traumatization, with men reporting an average of 10.0 sexual assaults during their lives, and women reporting an average of 7.5 sexual assaults.

There may be a number of reasons for elevated rates of trauma exposure among individuals with HIV. One possible mechanism is the link between childhood sexual abuse and subsequent participation in high risk sexual and drug use behaviors that lead to HIV infection. Further, many HIV-positive individuals live in impoverished environments associated with high levels of trauma exposure.

While relatively few studies have assessed PTSD in people with HIV, some researchers have found prevalence rates for PTSD of approximately 35 percent among HIV-positive women and gay or bisexual men, rates that are higher than those found in the general population (10.4 percent for women and 5.0 percent for men). A significant number of HIV-positive individuals may also have some symptoms of PTSD without meeting full criteria for the disorder.

A 1998 study also found that approximately 31 percent of a sample of HIV-positive men met criteria for PTSD following diagnosis with HIV, higher than rates for some other life-threatening medical illnesses. For many of the men in this study, HIV diagnosis was not their first exposure to trauma, and prior stressors may have increased their vulnerability to developing PTSD.

Several factors may contribute to high rates of PTSD among HIV-positive individuals. These factors include high rates of...
I worked for many years as a social worker for people living with HIV. Often, when I told new acquaintances about my occupation, they would nod sympathetically and say, “That must be so hard. There’s so much suffering.”

Certainly, living with HIV took its toll on my clients, and I saw partnerships, extended families, and communities hit again and again by its devastation. But, I remember feeling slightly disconnected by this response. First, there was much that was enjoyable about my job. Second, I had witnessed the amazing transformation of HIV from a life-threatening illness for most into a more chronic, more manageable illness for many.

But something else that made me feel disconnected was harder to articulate: much of the suffering I witnessed did not seem to have an obvious connection to HIV. Once my clients and I had gotten to know each other, clients would share their stories of the abusive, alcoholic mother or father, the extreme disciplinarian, the inappropriate uncle. I was struck by how often the same individual had experienced trauma over a lifetime—from childhood abuse to adult rape to domestic violence to street violence. Some of the challenges these clients faced as HIV-positive people were not new to them: shame and isolation and the sense that sex was dangerous were rooted as much in the past as in the present.

We don’t understand exactly how a history of abuse or trauma is related to HIV risk, but as Deborah Brief, Melanie Vielhauer, and Terence Keane remind us in this issue of FOCUS, research has uncovered powerful links. Studies of HIV-positive women and gay and bisexual men match my experience in the field, revealing high rates of trauma, often with an early onset, repeated over a lifetime. Their review offers several explanations of these links and charts the harmful effects of trauma on health outcomes. Nathan Hansen and Kathleen Sikkema delve into the incredible complexity of treating trauma, especially chronic trauma, and explore how current psychotherapies address its challenges.

Both articles remind us that one of the greatest ongoing harms of trauma is its potential to create problems in establishing trusting relationships: with doctors and mental health professionals as well as family, friends, and spouses or partners. Yet when survivors are able to risk connection, these relationships can be the source of understanding, and ultimately, healing. I remember being constantly amazed by the resilience of my clients, not only because they had survived histories that were hard even to hear, but also because they pointed their course toward safety and hope.

References
4. Finkelhor D, Holahan G, Lewis IA, et al. Sexual abuse in a national survey of adult men and women: Prevalence, characteristics and exposure to the types of events that often lead to PTSD, such as sexual assault; high rates of early trauma and repeated traumatization; and living in high risk environments characterized by poverty, violence, and a lack of support.

PTSD and Substance Use Disorder
It is important to note that for many reasons, many HIV-positive trauma survivors have substance abuse, as well as posttraumatic stress, disorders. Both childhood sexual abuse and early-onset PTSD are associated with drug use behaviors that lead to HIV. In addition, having PTSD may increase the risk of developing a substance use disorder, possibly as an attempt to self-medicate trauma symptoms. Finally, substance use may increase the risk of exposure to traumatic events that are likely to lead to PTSD.

When PTSD and substance use disorders occur together, it is important to address both disorders in treatment, since substance abuse can mask the symptoms of PTSD and interfere with PTSD treatment. Providers seeking more information on the complex combination of PTSD and substance abuse and its treatment should consult other sources.

Trauma, PTSD, and Health Outcomes
A growing body of research suggests that trauma exposure and PTSD negatively influence physical health perceptions, physical complaints, and physical illness. Researchers have found that among HIV-positive individuals, those with a sexual assault history report a greater number of HIV-related symptoms than those without this history, even in the absence of differences on objective measures of illness. In addition, a 1999 study found that HIV-positive women with three or more victimization experiences had a higher number of AIDS-defining medical conditions than women with fewer victimization experiences, suggesting that cumulative trauma may contribute to subsequent physical illness. Further, in a 2002 study of HIV-positive individuals with persistent pain researchers found that people with PTSD reported significantly higher levels of pain intensity than those without PTSD, regardless of health status.
Trauma and PTSD might influence these health outcomes through several pathways. First, individuals may misinterpret PTSD symptoms, especially those of hyper-arousal, as evidence of physical illness. An example of this might be rapid heartbeat as a response to trauma-related stimuli. Second, negative emotional states may contribute to survivors’ negative perceptions about their health. Third, trauma exposure may lead to increased participation in health-compromising behaviors and medication adherence difficulties. Finally, trauma may lead to changes in immune system capacity.

**Health-Compromising Behaviors.** Trauma exposure may lead to behaviors that compromise health. The literature suggests that women and men with a history of childhood sexual abuse are more likely than those without an abuse history to engage in unprotected sex, anonymous sex, sex with multiple partners, and sex work as well as injection drug use and needle sharing. Additional factors associated with HIV/AIDS, trauma, PTSD, and substance use disorders include physiological responses to trauma can contribute to PTSD symptoms, and gain a better understanding of the meaning of the trauma.

**Immune Function.** Trauma exposure and psychological responses to trauma can compromise immune functioning. A 1999 study found that HIV-negative female trauma survivors showed a more rapid decline in CD4+CD8+ cell ratios than women without this history. Studies also show that individuals without a history of child abuse have lower CD4counts than those without an abuse history. As such, trauma may lead to changes in immune system capacity.

**Treatment Implications and Interventions**

A number of empirically validated PTSD treatments have been found to decrease symptoms of PTSD and improve psychosocial functioning. Several techniques are described briefly below. Since substance use disorders can interfere with the effectiveness of trauma-focused therapies, a familiarity with treatments for co-occurring PTSD and substance use disorders is also important. Again, clinicians working with clients who experience this combination should seek further information about treatment.

Exposure therapy encourages clients to recall memories and confront feared reminders of the trauma they might otherwise avoid. This treatment involves in vivo and imaginal techniques used either separately or in combination. During in vivo exposure, clients typically confront situations, places, or objects that are reminders of the trauma, which may involve returning to the trauma site (for example, the site of a rape). Imaginal exposure is often used when in vivo exposure is not possible (such as when trauma occurred in the distant past or at a distant location).

For example, a client might discuss his or her narrative of the event in detail with the therapist as if the event were happening in the present, or the therapist might present a traumatic scene based on information previously presented by the client. Once thoughts and feelings associated with the traumatic event are activated, clients can learn skills to better manage their feelings, examine their thoughts and possible distortions in thinking that can contribute to PTSD symptoms, and gain a better understanding of the meaning of the trauma.

Two other PTSD treatment approaches are worth mentioning. Anxiety management training, which uses a variety of behavioral and cognitive strategies (such as breathing retraining; relaxation; communication skills, and anger management training; and cognitive restructuring), increases a client’s capacity to manage the emotions associated with PTSD. Cognitive therapy helps to identify and change the trauma-related distortions in thinking that help to maintain PTSD symptoms. Multi-dimensional treatment packages, which combine several of these approaches, have also received growing support. One example of this approach is cognitive processing therapy, which combines elements of exposure therapy, anxiety management training, and cognitive restructuring.


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The authors adapted this article from a version published in AIDS Care (2004; 16(Suppl. 1): S97–S120).

There has been little study of anxiety management training among people with HIV and PTSD. One study, however, observed the effects of anxiety management training on a group of gay men before and after HIV diagnosis, by its nature a potentially traumatic stressor. The study, conducted in 1991, enrolled gay men in a cognitive-behavioral stress management intervention or an assessment-only control condition.

The intervention condition included group support, education, relaxation, cognitive restructuring, and assertiveness training. The participants agreed that midway through the study (after about five weeks of treatment) they would be tested for HIV, and were notified of their status within 72 hours. Participants in the intervention group were more likely than those in the control group to use active coping strategies and to maintain social support after learning they were HIV-positive. These outcomes—active coping strategies and use of social support—are associated with better adherence.

The study also suggested that anxiety management training may help reduce the negative impact of trauma on immune functioning. Subjects who received cognitive behavioral stress management training prior to being informed of their HIV diagnosis showed a significant increase in CD4+ cell counts between pre- and post-notification, while men randomized to the assessment-only control condition showed no change. Moreover, post-notification immunologic values were positively associated with the frequency of self-reported daily home stress management practices.

Additional research is needed to determine whether cognitive behavioral stress training is as effective in HIV-positive individuals with exposure to other types of potentially traumatic events or in the presence of PTSD or whether these strategies will be as effective when administered following rather than prior to the traumatic event.

Integrating Services for HIV and PTSD

There are several ways in which the health care system might improve integration of care for HIV, PTSD, and co-occurring substance use disorders. First, routine primary care screening for trauma exposure, PTSD and substance use disorders may help to identify individuals in need of specialized treatment. Second, familiarity with existing treatments for PTSD and integrated therapies for PTSD with substance use disorder will enable providers to assist patients in making decisions about treatment options.

Third, development of collaborative networks of medical providers and trauma specialists should improve access to care and referrals to specialized treatment. Fourth, primary care-based motivational interventions may encourage clients to follow through with more specialized treatment referrals. Finally, offering PTSD or integrated PTSD and substance abuse treatment in HIV primary care settings may help to engage patients in these treatment services.

Conclusions

Researchers have made excellent progress toward understanding trauma exposure and PTSD in the HIV population. However, additional research is needed to improve our knowledge of risk factors for PTSD and PTSD with substance abuse in this population. In addition, it will be important to identify the mechanisms through which trauma and PTSD exert their effect on HIV risk behaviors, disease progression, and other health outcomes. Finally, a critical focus for future research will be the evaluation of PTSD and substance abuse treatments for their efficacy in improving mental health, psychosocial, and health outcomes in people with HIV.

Clearinghouse: Trauma and HIV

References


The effects of trauma exposure and posttraumatic stress disorder can undermine many of the goals of HIV prevention and care, including risk reduction and adherence to medical and psychological treatment. The experience of trauma can create shame and stigma, sometimes isolating survivors from social support. While most of the research on posttraumatic stress disorder (PTSD) treatment does not focus on HIV-related concerns, many treatment approaches are applicable to trauma survivors living with HIV.

A Pattern of Risk

The link between HIV and trauma is not causal. However, for a variety of reasons, trauma, particularly sexual trauma, increases behaviors that may lead to HIV transmission. For instance, survivors of abuse tend to re-enact behaviors learned in childhood. Therefore, childhood physical abuse is associated with aggressive adult behavior, while childhood sexual abuse has a stronger association with adult sexual risk.

Victims of sexual trauma may feel powerless in sexual encounters or the need to dissociate or use substances during sex, diminishing their ability to negotiate risk reduction. Low self-esteem can also make survivors feel that their lives are not worth protecting.

Treatment in the Face of Complexity

While psychological treatments reduce symptoms and alleviate suffering in many, the extent of these effects has been limited, with only 43 percent of participants in a meta-analysis of randomized clinical trials experiencing PTSD symptom remission. Pharmacotherapy for PTSD has been even less effective. Only 20 percent to 30 percent of participants using selective serotonin re-uptake inhibitors experience remission. Preliminary studies using beta-blockers such as propranolol have shown promise, although there is insufficient evidence to recommend their routine use.

Stopping medication usually results in the return of PTSD symptoms unless psychological treatment has been delivered concurrently. In the few studies that have compared combined concurrent pharmacological-psychological treatments to psychological treatments alone, there is typically no advantage in outcome in the combined treatment. The most favorable outcomes, such as those observed in randomized clinical trials of psychotherapy, tend to occur when participants who have experienced a single traumatic experience—for example, a rape or assault—receive cognitive-behavioral treatment featuring prolonged exposure to traumatic stimuli.

In contrast to those who have developed PTSD in response to a single traumatic event (sometimes called “simple PTSD,” although living with “simple PTSD” is not a simple experience), many people with HIV have extensive histories of trauma that extend back to childhood or include other chronic trauma exposure. These more extensive histories of trauma produce a complex array of symptoms, sometimes called “complex PTSD.” Among these symptoms are: long-standing maladaptive behavioral patterns, difficulty regulating emotions, difficulty maintaining relationships, and the effects of psychiatric conditions such as substance abuse and depressive disorders.

Symptoms of complex PTSD are similar to those of borderline personality, leading some to suggest redefining the diagnosis borderline personality disorder as complex PTSD.
argument arises from an almost universal pattern of early-onset abuse and trauma in people with borderline personality disorder, resulting in severe disruptions in psychological development, particularly around identity and interpersonal relationships.

A Phased Approach

Although brief PTSD interventions may achieve short-term relief, longer-term relief often requires longer-term, more intensive treatments to address relationship difficulties and destructive and avoidant behavior patterns. Such treatment usually involves a phase-oriented approach, consisting of a stabilization phase, an integration phase, and a post-integrative phase. Stabilization addresses issues that can disrupt treatment success, such as substance use, difficulty regulating emotions, and self-destructive behavior. Integration focuses on the trauma, including facing traumatic memories, and can include emotional and cognitive ways of coming to terms with the trauma. Post-integration refers to self- and relational development, and includes learning new skills and behaviors to replace maladaptive coping strategies.

Some theorists, however, suggest that these phases are actually parallel therapeutic tasks. Rather than proceeding sequentially through phases, treatment should shift between therapeutic tasks as needed to address client needs and readiness.

Self-Trauma Theory and Treatment

A useful framework for trauma treatment is John Briere’s self-trauma theory, which states that the symptoms survivors experience are actually a natural mechanism for healing. Intrusive symptoms such as flashbacks and nightmares desensitize survivors to the traumatic experience by re-exposing them to aspects of the trauma. Avoidance, whether behavioral, cognitive, or dissociative, keeps this exposure at manageable levels, particularly among individuals who lack adequate emotion regulation and coping skills.

This tension between exposure and avoidance mirrors cognitive-behavioral treatments for trauma. These treatments use prolonged exposure to traumatic memories to activate associated thoughts and feelings. The survivor then focuses his or her awareness on the difference between the distress of the traumatic memory and the safety of the therapeutic environment. Eventually, the survivor can use this awareness to change thought and response patterns so that reminders of the trauma no longer produce emotional distress.

Research shows that exposure is effective in treating trauma, especially intrusive symptoms, in many adults. However, because of a lack of emotional regulation skills, some individuals with more chronic trauma histories use powerful avoidance strategies to block out any re-exposure to the trauma. Chronic trauma survivors frequently hold negative beliefs and relationship expectations, which prevent the development of social support, including therapeutic relationships. They also have difficulty distinguishing between the safety of current environments and past unsafe ones, and this can diminish the effectiveness of exposure therapy. In response, a phase-oriented approach can provide stabilization prior to trauma-focused treatment.

For example, dialectical behavioral therapy, one of the only treatments that is effective with self-injurious and suicidal survivors of childhood abuse, can require more than a year of stabilization through intensive group and individual therapy, while teaching emotional regulation and interpersonal skills. Later, during the integration phase, therapy treats specific trauma symptoms.

While group therapy can frequently help trauma survivors, it can also retraumatize them. To avoid this, group therapy may be highly structured (as in dialectical behavioral therapy), act as an adjunct to individual therapy, or begin after client stabilization.

Since people with extensive trauma histories frequently lack coping skills beyond avoidance, the post-integration phase is critical both for new skill development and prevention of relapse into prior maladaptive behaviors. Clinicians who are not trauma experts can focus on stabilization and skill enhancement, referring clients to trauma experts for traumatic symptom treatment.

Conclusion

Significant improvements in physical and mental health and quality of life often accompany the resolution of traumatic experience. While complete resolution may be difficult to achieve for many HIV-positive trauma survivors, effective treatments are available to significantly reduce the suffering that accompanies psychological trauma.

Comments and Submissions

We invite readers to send letters responding to articles published in FOCUS or dealing with current AIDS research and counseling issues. We also encourage readers to submit article proposals. Send correspondence to rob.marks@ucsf.edu or to Editor, FOCUS, UCSF AIDS Health Project, Box 0884, San Francisco, CA 94143-0884.
Recent Reports

Childhood Sexual Abuse and Risk Behavior

As Deborah Brief, Melanie Vielhauer, and Terence Keane discuss in their overview article, there is a strong association among child sexual abuse, trauma, and behaviors that can lead to transmission. This University of Connecticut study further explores the links among these experiences and underscores the importance of childhood sexual trauma in relation to HIV risk behaviors. The following excerpt is adapted from the published abstract:

Men with histories of childhood sexual abuse were more likely to engage in high-risk sexual behavior, according to a large study that examined the psychological and behavioral correlates of childhood sexual abuse in a sample of men who have sex with men.

A total of 647 men attending a large gay pride event completed anonymous surveys that assessed demographic characteristics, childhood sexual abuse history, symptoms of dissociation and trauma-related anxiety, borderline personality characteristics, substance use, and sexual risk behavior. Men who had a history of childhood sexual abuse were more likely to: engage in unprotected receptive anal intercourse, trade sex for money or drugs, report being HIV-positive, and experience non-sexual relationship violence.

PTSD and Health Status in People with HIV

For people living with HIV, the experience of illness or wellness goes beyond viral load counts and other laboratory test results. As Brief and her colleagues note, subjective experiences of pain and other patient perceptions of health are important and may be influenced by the experience of trauma. This article further explores the association between trauma history and negative health outcomes. The following excerpt is adapted from the published abstract:

Patients with more incidents of lifetime trauma and stressful events, and more PTSD symptoms reported more bodily pain, and poorer physical, role, and cognitive functioning than patients with less trauma and PTSD, according to a study conducted at rural HIV clinics in the southern United States.

In addition to biological markers of HIV disease progression, physical functioning and utilization of health care may also be important indicators of health status in HIV-infected patients. The current study examines how trauma, severe stressful events, PTSD, and depressive symptoms relate to physical functioning and health utilization among HIV-positive men and women.

Researchers consecutively sampled patients from eight rural HIV clinics in five southern states, obtaining 611 completed interviews. Trauma, recent stressful events, and PTSD accounted for 12 percent to 27 percent of the variance in health-related functioning over and above that explained by demographic variables.

Patients with more incidents of trauma, including sexual and physical abuse, and PTSD symptoms were at greater risk for having bed disability, an overnight hospitalization, an emergency room visit, and four or more HIV outpatient clinic visits in the previous nine months. Compared to patients without a history of abuse, patients with a history of abuse had about twice the risk of spending five or more days in bed, having an overnight hospital stay, and visiting the emergency room.

The effects of trauma and stress were not explained by CD4+ cell count or HIV viral load. However, these effects appear to be largely accounted for by increases in current PTSD symptoms.

PTSD and Medication Adherence
Boarts JM, Sledjeski EM, Bogart LM, et al. The differential impact of PTSD and depression on HIV disease markers and adherence to HAART in people living with HIV. AIDS and Behavior. 2006; E-publication ahead of print. (Kent State University; RAND Corporation, Santa Monica, Calif.; and Northeastern Ohio Universities College of Medicine, Rootstown, Ohio.)

As Brief and her colleagues note, there is a strong association between trauma, symptoms of depression, and health outcomes for people with HIV. This Kent State University study explores the combination of PTSD and depression and its effects on HIV medication adherence and other health outcomes. The
following excerpt is adapted from the published abstract:

HIV-positive patients with both PTSD and depression were less likely to adhere to HIV antiviral medication regimens and were more likely to have viral loads above the level of detection, according to a study that examined the independent and combined influences of PTSD and depression symptoms on health status. The study looked at medication adherence, CD4+ cell count, and viral load over the course of three months among 57 HIV-positive clients. The sample was 82 percent male, 54 percent White, and 44 percent African American.

Both PTSD and depressive symptoms predicted lower adherence to medication regimens. However, only depressive symptoms predicted lower CD4+ cell counts and viral load above the level of detection.

Childhood Sexual Abuse and PTSD Symptoms

All the authors in this issue note the powerful association between childhood sexual abuse and later sexual behavior and the often cumulative nature of trauma over a survivor’s lifespan. As Nathan Hansen and Kathleen Sikkema point out, many treatments for trauma focus on survivors of a single traumatic event, while trauma histories for many are more complex. This University of California, Los Angeles study explores this complexity and its effect on PTSD symptoms. The following excerpt is adapted from the published abstract:

Experiencing both intrafamilial and extrafamilial childhood sexual abuse, experiencing adult sexual abuse, and being Latina predicted PTSD symptoms among HIV-positive women, according to a study that examined the full burden of abuse over participants’ lifespans.

The study used a multidimensional approach to examine the relationship between severity of abuse and posttraumatic stress, depression, sexual symptoms, and risky sexual behaviors in a multi-ethnic sample of 147 HIV-positive women. Adult sexual abuse predicted sexual trauma symptoms. Childhood sexual abuse and adult re-victimization contributed independently to risk for PTSD and sexual trauma symptoms, but not for HIV-related sexual behaviors.

HIV-Related PTSD Symptoms

As Hansen and Sikkema note, the experience of trauma can compound the shame and stigma already faced by many people with HIV and at risk for HIV. This St. John’s University study examines the role of stigma as a critical factor in predicting PTSD and HIV symptoms. The following excerpt is adapted from the published abstract:

The degree of stigma experienced by participants regarding their HIV diagnoses was a strong predictor of the severity of HIV-related PTSD symptoms among HIV-positive women in New York.

Researchers examined risk factors for PTSD symptomatology in a sample of 102 HIV-positive women recruited from HIV treatment centers. The sample was 66 percent African American and 19 percent Latina.

Magnitude of HIV-related PTSD symptoms was associated with a greater number of HIV-related physical symptoms, more extensive history of pre-HIV trauma, less perceived availability of social support, greater degree of perceived stigma, and greater degree of negative life events. Further analysis revealed three individual predictors of PTSD symptomatology: total impact of negative life events, total stigma score, and total number of present symptoms. Social support failed to moderate relationships between PTSD symptomatology and HIV-related physical symptoms and negative life events.

Next Issue

Hepatitis C is the most common chronic blood-borne disease in the United States, the most common HIV co-infection, and a major cause of hospitalizations and death among people living with HIV. In the May issue of FOCUS, Heather Lusk, the Hepatitis C Coordinator in the Hawaii Department of Health, reviews the epidemiology, transmission, and prevention of hepatitis C, the clinical manifestations and complications of co-infection with hepatitis C and HIV, and hepatitis C treatment for people with HIV.

Also in the May issue, Charles Raison, MD, Assistant Professor of Psychiatry and Behavioral Sciences and Director of the Behavioral Immunology Clinic at Emory University, discusses the mental health effects of both hepatitis C infection and of hepatitis C treatments.
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