



Abstract

## Hypomania in an HIV Positive Patient

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Human immunodeficiency virus (HIV) is a retrovirus that affects CD4 lymphocytes. Inflammation and neoplasms occur as a consequence of the destruction of the cellular origin of immunity and disruption of the general immunity regulation. HIV enters the nervous system during the first hours of infection and persists throughout the entire infection. Many psychiatric syndromes can be observed in HIV-infected individuals, such as depressive disorders, anxiety disorders, personality disorders, bipolar disorder, sleep disorders, alcohol-substance abuse disorders, delirium, dementia, and psychosis. Here we present a case of hypomania that developed in an HIV positive patient, aiming to point out the importance of screening, diagnosing, and treating psychiatric disorders related to HIV presence. A 41-year-old male patient was diagnosed with acquired immunodeficiency 6 months ago, and while he was being followed up at an infectious diseases clinic, he presented sudden onset of insomnia, nervousness, overtalking, and overspending money behaviors. He was referred to a psychiatry clinic, and at psychological examination of the patient, increased mood and psychomotor activity were detected. Haloperidol ampule 10 mg/day and biperiden ampule 5 mg/day were started and given for 3 days. There were neither hallucinations or delusions nor homicide or suicide ideas. No substance abuse history was present. He was diagnosed with hypomania due to acquired immunodeficiency. The patient has been in remission for the last 3 months and is still being followed up in our clinic.

**Keywords:** Hypomania, human immunodeficiency virus, depression

### Introduction

A human immunodeficiency virus (HIV) infection is a chronic infectious disease in which the immune system is gradually suppressed by the effects of the virus. HIV is a retrovirus from the family of lentiviruses. Retroviruses are viruses enveloped with a single-stranded RNA. They convert their genetic materials into a double-stranded DNA by the reverse transcriptase enzyme and then integrate them into the host chromosome. There are specific glycoproteins that play a role in cell activities and functions on the surfaces of human lymphocytes. Lymphocytes carrying CD4 cell surface antigens are the cells that help immunologic reactions. CD4<sup>+</sup> lymphocytes are also primary targets of an HIV infection. During the course of an HIV infection, the CD4<sup>+</sup>T cell count decreases gradually, and opportunistic infections for acquired immunodeficiency syndrome (AIDS) and cancers occur. While the number of neoplasms is decreasing with new treatment methods, the rate of psychiatric diseases is increasing on the contrary (1, 2). Depression, alcohol abuse, anxiety, mania, schizophrenia, and cognitive disorders can be observed in HIV-positive patients (3). Psychiatric comorbid diseases decrease the compliance of patients with treatment, impair the quality of life, and increase risky behaviors. Therefore, the treatment of an HIV infection should be multidisciplinary, and one step of the treatment should be a psychiatric assessment. In this study, the aim was to present a hypomania case developing in an HIV-positive patient and to emphasize an importance of determining, diagnosing, and treating psychiatric signs that occurred in the presence of an HIV infection.

### Case Report

A 41-year-old male patient, who was an accountant, a high school graduate, and who divorced his wife, was being followed up in the outpatient clinic for infectious diseases at our hospital due to the diagnosis of AIDS for 6 months. In the last laboratory analysis of the patient, the CD4 count was found to be 550 mm<sup>3</sup>, and the HIV RNA was negative. Efavirenz and tenofovir+emtricitabine were used in the treatment of the patient. He was stable in terms of infection, but he was referred to the psychiatric outpatient clinic due to a sudden onset of certain complaints, which were gradually increasing and lasting for 3 days, such as increasing speech, insomnia, spending money excessively, and nervousness. In his psychiat-

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ric examination, it was found that he had an expansive mood and labile affect, and his associations and psychomotor activity were increased. No delirium hallucinations were observed in his thought content. He had no history of substance abuse. Because he did not fulfil the criteria for the diagnosis of acute mania, he was thought to have hypomania. Since no homicide and suicide ideations were observed, haloperidol amp 10 mg/day and biperiden amp 5 mg/day were administered for 3 days. No abnormality was detected in the cranial tomography. Upon his psychiatric examination that was performed on the 3rd day, it was observed that his expansive mood was decreased. The Young Mania Rating Scale (YMRS) was applied, and the score was found to be 14, which was higher than normal. Because the patient had no history of previous psychiatric disease and treatment, had complaints only for 3 days, and did not meet the criteria for the diagnosis of mania, he was evaluated to have hypomania associated with acquired immunodeficiency. The patient has been in remission for the past 3 months, and he has been being followed up at our outpatient psychiatric clinic.

Written informed consent was received from the patient for the study.

## Discussion

The most common psychiatric disease in HIV-positive patients is depression at the rate of 40%. The incidence of depression in these patients has been reported to be higher than that in general population (4-5). On the other hand, manic symptoms are encountered in 8% of HIV-positive patients. Acute mania can also be associated with premorbid bipolar disorder, infection of the brain related to HIV, neoplasms, and applied treatments (6). The characteristic of HIV infection-associated mania is that patient has no history of previous mania and no familial history of bipolar disorder. In our patient, the diagnosis of hypomania was established because the criteria for mania were not exactly met, and the duration was short. Moreover, the patient had no familial history of the disease, and he did not receive psychiatric treatment previously.

Irritability and hypomanic episodes can be observed together with HIV dementia (7). It is important to differentiate mania associated with an HIV infection from dementia. In dementia associated with an HIV infection, findings of cognitive disorder can also be present. In our patient, cognitive disorder was not detected.

In literature, low-dose antipsychotic agents are suggested to be effective in the treatment of HIV-associated mania. Our patient adequately responded to a low-dose antipsychotic therapy (8). As a mood stabilizer, response can be obtained by anticonvulsants in patients who do not show any response to or cannot tolerate lithium and haloperidol; divalproex sodium is effective, and it is well-tolerated. Carbamazepine and phenytoin should be used carefully because they are inducers of P450 enzymes, and they can lead to low therapeutic levels of anti-retrovirals. Since carbamazepine is an inducer of CYP3A4 enzyme, it increases the metabolisms of protease inhibitors such as indinavir that is used in AIDS treatment and non-nucleoside reverse transcriptase inhibitors such as delavirdine (9). In pa-

tients developing manic syndrome in early stages of HIV disease, personal or familial history of mood disorders has been encountered frequently; it has been observed that zidovudine, which is an anti-HIV treatment agent, can trigger mania; and lithium has been found to be effective in the treatment (10). It has been demonstrated that the rate of suicide is 36 times higher in patients with AIDS than in those not diagnosed with AIDS. Patients diagnosed with AIDS display a lower tendency to commit suicide compared to those being HIV positive but not developing AIDS (11). A decrease is expected in the rates of suicide because of changes in the attitude of the society and more hopeful perception due to improvements in the treatment. Our patient had no suicidal ideation.

## Conclusion

Both medical and psychiatric diseases occur in the presence of an HIV infection. An early diagnosis of psychiatric diseases will both increase compliance to treatment and improve the quality of life. It will also contribute to public health by preventing possible uncontrolled behaviors of the patient. Therefore, the approach to the treatment of HIV infection should be multidisciplinary, and a psychiatrist should be definitely included in the team.

**Informed Consent:** Informed consent was obtained from the patient who participated in this study.

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