CLINICAL VIGNETTE

Sore Throat: Could It Be Acute HIV?

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A 56-year-old married male, who recently returned from Las Vegas, presented to follow-up for a persistent sore throat and fever of 2 weeks' duration.

One week prior, he developed flu-like symptoms, initially with sore throat with associated fatigue, anorexia, generalized joint pains, low grade fever, chills and night sweats. He denied nausea, vomiting, diarrhea or urinary symptoms. He took over-the-counter Acetaminophen 1 gram every 8 hours and Ibuprofen 400 mg every 8 hours which provided transient improvement prompting urgent care evaluation. He was thought to have a non-specific acute viral syndrome and underwent several diagnostic tests which were consistent with non-specific acute viral syndrome. Tests included a CBC with total WBC count of 1.1 x10E3/uL and a normal Chest x-ray. He was instructed by urgent care to continue taking acetaminophen and ibuprofen and sent home. Because of persistent flu-like symptoms, patient presented to another urgent care. Labs included CBC with total WBC count of 2.9, x10E3/uL, Hgb 14.1 g/dL, platelet count 166 x10E3/uL. Chemistries included sodium of 129 mmol/L, total bilirubin 0.6 mg/dL, AST 72 U/L, ALT 114 U/L. Tests for rapid flu, rapid strep and monospot were negative. He was again given the diagnosis of non-specific acute viral syndrome, given IV fluids and advised to follow up with a primary care physician.

One week later, he was seen for consultation with significant improvement of clinical symptoms except for persistence of sore throat. Pertinent physical exam findings included a solitary, shallow, non-exudative ulcer on the posterior pharyngeal wall. There was no associated cervical lymphadenopathy or skin rash. Lung and abdomen were normal. Laboratory data included AST 151 U/L, ALT 146 U/L. and 4th generation HIV-1/2 Ag/Ab Screen was positive with negative HIV-1/2 Ab confirmatory tests. HIV RNA Quantitative PCR showed >10 million copies. Hepatitis B and C screening tests were negative.

The patient was informed of the HIV results and reported having multiple episodes of unprotected sexual intercourse with other men.

Discussion

Around 1.1 million people are diagnosed with HIV infection in the United States with nearly one in seven cases unaware that they have HIV infection.[1] Men who have sex with men (MSM) is the group most affected by HIV in the United States, accounting for approximately 66% of new cases of HIV infection annually.[2,3]

There are various indications for HIV testing including but not limited to the following: symptoms and signs consistent with primary HIV infection (e.g. mononucleosis-like syndrome), unprotected sexual intercourse with gay men and other men who have sex with men and people with multiple sexual partners or recent partner change.[4]

The Center for Disease Commission's (CDC) recommendation all persons aged 13-64 years should be screened for HIV at least once. The CDC recommends annual testing for those with specific risk factors.[1] Acute HIV infection is the earliest stage of HIV infection and generally develops within 2 to 4 weeks after initial HIV infection.[4] Patients may present with a constellation of flu-like symptoms including fever, headaches, sore throat, muscle aches, joint pains and rash.[5] Sore throat is a frequent manifestation of acute viral infection with typical physical exam findings of pharyngeal edema and hyperemia usually in the absence of tonsillar enlargement or exudate.[6] One distinctive and characteristic finding of acute HIV infection is the presence of painful, shallow, well demarcated oral mucosal ulcers.[7]

It is easy to overlook the clinical manifestations of acute HIV infection since the signs and symptoms of acute HIV infection are similar to acute viral syndromes such as infectious mononucleosis.[5] Most patients with the acute viral infection are not fully aware that they have contracted the HIV virus. The initial clinical symptoms spontaneously resolve and are often mistaken for another illness.[4] Without a high degree of suspicion, the diagnosis is frequently be missed by the clinician.[4,5]

Physicians who strongly consider diagnosis of acute HIV infection should perform sensitive Enzyme -like immunoassay (ELISA) in combination with HIV viral load. Appropriate interpretation of the test depends on the pattern of immunoassay reactivity and the timing of the clinical presentation.[5] Early HIV infection typically has negative HIV screening immunoassay with a positive virologic test.[8]

Early detection of HIV infection and prompt initiation of antiretroviral therapy (ART) in patients with acute HIV infection has been shown to significantly improve the life expectancy and quality of life of patients with HIV infection.[9] Early treatment not only reduces the probability of HIV

transmission by decreasing viral reservoir but also improves the clinical symptoms related to acute HIV infection.[8] Appropriate initiation of ART has been shown to preserve CD4 cell count and viral set points thereby reducing the likelihood that the infection progresses to a more advanced stage.[8,9]

Prompt referral to an HIV expert ensures that the ART medications are closely monitored for efficacy, tolerability and potential side effects with improved medication compliance.[8]

Conclusion

Acute HIV infection poses a diagnostic dilemma because the symptoms are usually transient and very non-specific. However, making the correct diagnosis is critical. Clinicians should have a high index of suspicion in considering the diagnosis and should be familiar with the specific diagnostic tests to correctly establish diagnosis of acute HIV infection. Acute HIV should be considered in the differential diagnosis for sore throat. Early recognition and prompt initiation of appropriate anti-retroviral therapy in patients with acute HIV infection can significantly alter the prognosis and improve clinical outcomes. These include decreased risk of disease transmission and improving the natural course of the infection for the individual patient and from a public health standpoint.

REFERENCES

1. **Centers for Disease Control and Prevention**. HIV Surveillance Report: Estimated HIV Incidence and Prevalence in the United States 2010–2015; vol 23. Available at: https://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-supplemental-report-vol-23-1.pdf.
2. **Ridzon R, Gallagher K, Ciesielski C, Ginsberg MB, Robertson BJ, Luo CC, Dearia A Jr**. Simultaneous transmission of human immunodeficiency virus and hepatitis C virus from a needle-stick injury. *N Engl J Med*. 1997 Mar 27;336(13):919-22. PubMed PMID: 9070472.
3. **Hollingsworth TD, Pilcher CD, Hecht FM, Deeks SG, Fraser C**. High Transmissibility During Early HIV Infection Among Men Who Have Sex With Men-San Francisco, California. *J Infect Dis*. 2015 Jun 1;211(11):1757-60. doi: 10.1093/infdis/jiu831. Epub 2014 Dec 26. PubMed PMID: 25542958; PubMed Central PMCID: PMC4425938.
4. **Daar ES, Pilcher CD, Hecht FM**. Clinical presentation and diagnosis of primary HIV-1 infection. *Curr Opin HIV AIDS*. 2008 Jan;3(1):10-5. doi: 10.1097/COH.0b013e3282f2e295. PubMed PMID: 19372938.
5. **Branson BM, Stekler JD**. Detection of acute HIV infection: we can't close the window. *J Infect Dis*. 2012 Feb 15;205(4):521-4. doi: 10.1093/infdis/jir793. Epub 2011 Dec 29. PubMed PMID: 22207652.
6. **Valle SL**. Febrile pharyngitis as the primary sign of HIV infection in a cluster of cases linked by sexual contact. *Scand J Infect Dis*. 1987;19(1):13-7. PubMed PMID: 3563421.
7. **Lapins J, Gaines H, Lindbäck S, Lidbrink P, Emtestam L**. Skin and mucosal characteristics of symptomatic primary HIV-1 infection. *AIDS Patient Care STDS*. 1997 Apr;11(2):67-70. Review. PubMed PMID: 11361765.
8. **Owen SM**. Testing for acute HIV infection: implications for treatment as prevention. *Curr Opin HIV AIDS*. 2012 Mar;7(2):125-30. doi: 10.1097/COH.0b013e3283506613. Review. PubMed PMID: 22314506.
9. **Cohen MS, Chen YQ, McCauley M, Gamble T, Hosseinipour MC, Kumarasamy N, Hakim JG, Kumwenda J, Grinsztejn B, Pilotto JH, Godbole SV, Mehendale S, Chariyalertsak S, Santos BR, Mayer KH, Hoffman IF, Eshleman SH, Piwowar-Manning E, Wang L, Makhema J, Mills LA, de Bruyn G, Sanne I, Eron J, Gallant J, Havlir D, Swindells S, Ribaudo H, Elharrar V, Burns D, Taha TE, Nielsen-Saines K, Celentano D, Essex M, Fleming TR; HPTN 052 Study Team**. Prevention of HIV-1 infection with early antiretroviral therapy. *N Engl J Med*. 2011 Aug 11;365(6):493-505. doi: 10.1056/NEJMoa1105243. Epub 2011 Jul 18. PubMed PMID: 21767103; PubMed Central PMCID: PMC3200068.