Acute HIV infection in a 39-year-old man

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A 39-year-old man presented to the emergency department with a 7-day history of fever and rash. He reported same-sex relationships involving condomless anal sex, and did not use pre- or postexposure HIV prophylaxis. Physical examination found a temperature of 38°C, cervical lymphadenopathy, mucosal ulceration on his tongue and a maculopapular rash on his face, neck and anterior chest (Figure 1). Suspecting primary HIV infection, we performed a rapid plasma reagin test, which returned a negative result. A chemiluminescent immunoassay was positive for HIV antibodies, but the reactive immunoassay using Western blotting showed no reactivity. The patient's HIV-1 blood viral load was 4.79 million copies/mL with a blood CD4 T-cell count of 0.1 × 10^9/L. We diagnosed acute HIV infection and started antiretroviral treatment with bictegravir–emtricitabine–tenofovir alafenamide.

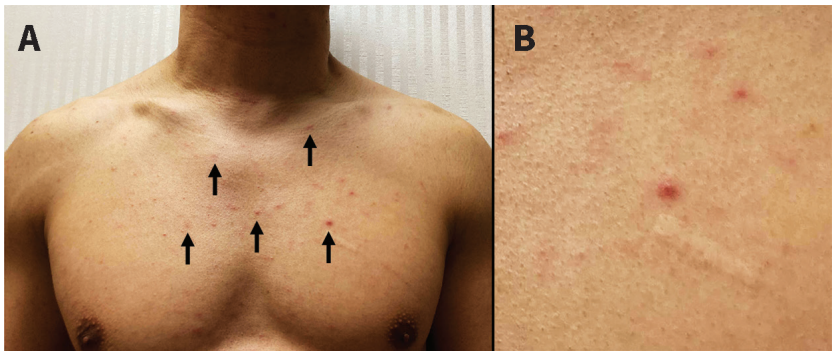

Figure 1: Photographs of a 39-year-old man with acute HIV infection, showing (A) small, well-circumscribed, red maculopapular rashes (arrows) on his anterior thorax. (B) Close-up image of the rash.

Features of acute HIV infection occur 2–4 weeks after exposure; seroconversion usually occurs 3–8 weeks after initial infection. Common presentation includes fever, arthralgia and lymphadenopathy, which may mimic acute mononucleosis.[1] Mucocutaneous ulceration is highly suggestive of acute HIV infection.[2] Rash occurs in about 50% of patients, typically 3 days after fever onset, and persists for 5–8 days. It is characterized by small (5–10 mm), well-circumscribed, erythematous macules or maculopapules, mainly on the anterior chest.[1,2] A history of high-risk sexual contact raises suspicion of acute HIV infection.

Transmission rates among patients with acute HIV infection are 9–15 times greater than among those with chronic infections.[3] However, the diagnosis of acute HIV infection is often missed owing to the asymptomatic or self-limited nature of the virus, nonspecific signs (such as the rash seen in our patient) or clinician hesitancy to ask questions about sexual exposure. Immediate initiation of antiretroviral therapy in the early stage of HIV infection reduces viral load.[4]

References

1. Chu C, Selwyn PA. Diagnosis and initial management of acute HIV infection. *Am Fam Physician* 2010;81:1239-44.
2. Richey LE, Halperin J. Acute human immunodeficiency virus infection. *Am J Med Sci* 2013;345:136-42.
3. Hollingsworth TD, Pilcher CD, Hecht FM, et al. High transmissibility during early HIV infection among men who have sex with men-San Francisco, California. *J Infect Dis* 2015;211:1757-60.
4. The INSIGHT START Study Group; Lundgren JD, Babiker AG, Gordin F, et al. Initiation of antiretroviral therapy in early asymptomatic HIV infection. *N Engl J Med* 2015;373:795-807.

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