TB and HIV surveillance amid COVID-19 pandemic

Sir,

Coronavirus disease 2019 (COVID-19) has caused an unprecedented disruption of healthcare systems in many countries. This might affect other public health programs that address critical infectious diseases such as human immunodeficiency virus (HIV)/AIDS and tuberculosis (TB). Currently, COVID-19 testing could overshadow global HIV and TB testing targets.[1]

Infection with SARS-CoV-2 can impose a major health burden in patients who are already living with comorbidities of HIV.[2] To reduce the burden of COVID-19 infection in HIV patients, the surveillance for HIV should be increased, leading to identification of more patients with less severe comorbidities.

Latency in HIV testing could result in patients being diagnosed with higher viral loads and lower CD4 counts.[3] This immunocompromised state increases the morbidity and mortality risk of these individuals in the presence of COVID-19 co-infection.[3]

Previous pandemics of viral infections such as Ebola and influenza caused major disruptions in prevention and diagnosis of endemic diseases such as TB.[4] An international multicenter cohort study showed that COVID-19 often results in a higher rate of hospital admission and death among patients with active and latent TB.[5]

Immunocompromised patients living with HIV often have a greater risk of co-infection with TB. Developing countries were already struggling to fund HIV and TB surveillance programs to identify and treat patients with HIV and TB at an earlier stage.[6] It is anticipated that majority of low-income countries will face greater economic challenges in the era of COVID-19, due to negative economic impacts of nationwide lockdown restrictions.

One of the strategies to prepare the public and the healthcare system to face the COVID-19 pandemic is to improve the surveillance of HIV and TB. Increased surveillance of HIV and TB in the current situation would not only benefit the society as a result of reduced burden of these endemic infectious diseases but also would certainly alleviate the pressure on already overwhelmed healthcare systems in developing countries.

Public healthcare systems and governments in developing countries may benefit from implementing cost-effective targeted population approaches to identify high-risk groups, screen, and diagnose patients at an early stage. Particularly, it is important to screen individuals from high-risk groups such as men who have sex with men, sex workers, intravenous drug user, and immigrants from areas with a high prevalence of TB. In addition, public health campaigns may be used to educate the general public, and continued professional development programs would help in raising awareness among the healthcare workers. COVID-19 is recognized as a multisystemic infection.[7] Immunocompromised patients with comorbidities often have a greater risk of developing COVID-19 complications and admission to intensive care unit.[8]

In conclusion, the implementation of public health strategies to reduce the burden of complications of COVID-19 in patients with HIV and TB would be essential in the current pandemic. Furthermore, the costs of treating patients with these complications would be reduced for already stretched healthcare systems.

Financial support and sponsorship Nil.

Conflicts of interest There are no conflicts of interest.

Alireza Sherafat, Mohammad Ali Ashraf3, Kianoush Vosough2, Tess Cruickshank2, Kiana Shirani3

Undergraduate Department, School of Medicine, University of Central Lancashire, Preston, United Kingdom, 1Student Research Committee, Shiraz University of Medical Sciences, Shiraz, Iran, 2Undergraduate Department, School of Medicine, University of Buckingham, Buckingham, United Kingdom, 3Infectious Diseases and Tropical Medicine Research Center, Isfahan University of Medical Sciences, Isfahan, Iran

Address for correspondence: Dr. Kiana Shirani, Infectious Diseases and Tropical Medicine Research Center, Isfahan University of Medical Sciences, Isfahan, Iran. E-mail: kianashirani@med.mui.ac.ir

References
1. Adepoju P. Tuberculosis and HIV responses threatened by COVID-19. Lancet HIV 2020;7:e319-20.
2. Shiau S, Krause KD, Valera P, Swaminathan S, Halkitis PN. The burden of COVID-19 in people living with HIV: A syndemic perspective. AIDS Behav 2020;24:2244-9.
3. Minotti C, Tirelli F, Barbieri E, Giaquinto C, Donà D. How is immunosuppressive status affecting children and adults in SARS-CoV-2 infection? A systematic review. J Infect 2020;81:e61-6.
4. Alene KA, Wangdi K, Clements AC. Impact of the COVID-19 pandemic on tuberculosis control: An overview. Trop Med Infect Dis 2020;5:123.
5. Tadolini M, Codecasa LR, García-García JM, Blanc FX, Borisov S, Alfenanar JW, et al. Active tuberculosis, sequelae and COVID-19 co-infection: first cohort of 49 cases. Eur Respir J 2020;56:2001538. Published 2020 Jul 9. doi:10.1183/13993003.01398-2020.
6. Harries AD, Schwoebel V, Monedero-Recuero I, Aung TK, Chadha S, Chiang CY, et al. Challenges and opportunities to prevent tuberculosis in people living with HIV in low-income countries. Int J Tuberc Lung Dis 2019;23:241-51.
7. Ashraf MA, Sherafat A, Pourdast A, Nazemi P, Mohraz M. The application of direct viral cytopathic hypothesis to design drug trials in the battle against COVID-19. Daru. 2020;28:813-4. doi:10.1007/
Sir,

Syphilis has earned the label of "a great imitator" with its protean morphologies of skin lesions. Lichenoid secondary syphilis is a rare presentation, usually seen in human immunodeficiency virus (HIV)-seropositive patients.

Immune reconstitution inflammatory syndrome (IRIS) is defined as a paradoxical worsening of a known condition or the onset of a new condition after the initiation of antiretroviral therapy (ART) due to restoration of immunity to specific infectious or noninfectious antigens in HIV-positive patients. [1]

We report a patient of generalized lichenoid secondary syphilis presenting as a result of the IRIS and a genital ulcer of mixed etiology.

A 32-year-old man presented with multiple hyperpigmented lesions all over the body for 5 months and a painful, genital ulcer for 1.5 months. He was a known HIV-positive patient on ART (tenofovir, lamivudine, and efavirenz) for 5 months. The hyperpigmented lesions appeared 2 weeks after the initiation of ART. The patient was not carrying this record of CD4 count and viral load. He was unmarried and had multiple female sexual partners. However, he denied any recent sexual exposure in the past 1½ years. He had no systemic complaints.

On examination, there were multiple, discrete as well as coalescent, round-to-oval-shaped, violaceous-to-dark-brown plaques with mild scaling on the surface over the face, trunk, and limbs. Similar plaques were present over the palms and soles with dusky erythema [Figure 1a, and b]. There were few, small areas of nonscarring alopecia over the scalp. He also had phimosis and a superficial, painful ulcer over the tip of the prepuce [Figure 1c]. He had generalized lymphadenopathy (cervical, epitrochlear, and inguinal).

Clinical differential diagnoses of secondary syphilis such as IRIS and lichenoid drug eruption secondary to ART, with genital herpes, were kept. Tzanck smear showed multinucleated giant cells. Venereal disease research laboratory (VDRL) test was reactive with high titers of 1:1024. Treponema pallidum hemagglutination assay was positive. The patient had no neurological symptoms. Quadruplex polymerase chain reaction (PCR) for detection of T. pallidum, Hemophilus ducreyi, HSV-1, and HSV-2 from the genital ulcer, was positive for T. pallidum and HSV-2. Skin biopsy revealed parakeratosis and apoptotic keratinocytes in the epidermis. There was vacuolar degeneration of the basal layer with a band-like chronic inflammatory infiltrate in the upper dermis. The reticular dermis showed a peri-appendageal infiltrate composed of lymphocytes and plasma cells [Figure 2a and b]. Thus, we arrived at a diagnosis of lichenoid secondary syphilis due to IRIS, along with genital herpes.