

## Notes from the Field

## HIV-2 Seroepidemiological Evidence in Hunan Province — China, 2003–2020

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The human immunodeficiency viruses-2 (HIV-2) is endemic in West Africa and is a rarely imported infectious disease in China due to the small number of cases having had a history of living abroad (1–3). In 2007, through routine HIV surveillance, 2 HIV-2 infected individuals were confirmed by serology and nucleic acid testing, becoming the first report of HIV-2 in China. Epidemiological case investigation showed that the two infected individuals had sexual contact, which were transmitted by heterosexual contact (4). In order to understand whether there are more HIV-2 infected individuals and the epidemiological characteristics of HIV-2, we conducted HIV-2 antibody detection and epidemiological investigation on the sera of individuals previously suspected of contracting HIV-2 in Hunan Province.

Stock blood samples with HIV-2 indicative bands in the original records of 15 AIDS laboratories in Hunan Province from 2003 to 2020 were collected. The laboratory of Hunan Provincial Center for Disease Control and Prevention used the approved and marketed kit [Germany Mikrogen GmbH (HIV 1+2) antibody testing kit] for simultaneous diagnosis of HIV-1 and HIV-2. Epidemiological data of the first test and of follow-up records of patients that could be contacted were also collected.

A total of 378 samples with HIV-2 indicative bands were collected, involving 363 individuals. Serological test results showed that 326 cases (89.81%) were HIV-1 antibody positive, 18 cases (4.96%) were HIV-2 antibody positive, 12 cases (3.31%) were HIV antibody positive but could not be typed, 6 cases (1.65%) were HIV antibody uncertain and 1 case (0.28%) was negative for HIV-1/2 antibody. Among the 18 HIV-2 antibody positive individuals, there were 15 cases from Xiangtan City and 3 cases from Changsha City. The epidemiological investigation showed that the cases consisted of 12 males (66.67%) and 6 females (33.33%), with a male-to-female ratio of 2:1. The average age of the first detection was (56.94±12.52) years old, with the male age ranging

from 33 to 76 years old and the female age ranging from 44 to 66 years old. There were 10 married patients (55.56%) including 1 couple, 6 patients who were divorced or widowed (33.33%), and 2 (11.11%) with unknown marital status. There were 13 cases found from hospital monitoring (72.22%), 2 from prison detention, 2 from blood screening in volunteer donors (22.22%), and 1 from spouse screening (5.56%). These samples were tested and 1 case was found in each year of 2005, 2009, 2013, 2014, 2018, and 2020, 6 cases in 2016, 2 cases in 2017, and 4 cases in 2019. By the end of 2020, 9 cases were alive and 9 cases were dead or missing; 3 cases have accepted antiviral treatment. Of the 7 cases that could be followed up with, all admitted to heterosexual transmission, 6 cases denied any history of travelling abroad, and 1 case denied any history of foreign sexual intercourse.

The HIV-2 infection epidemic has lasted for a long time in Hunan Province, and local transmission cases have already existed. The sites of infection are concentrated in Xiangtan and Changsha City, and there is a possibility of cluster infection. The initial source of HIV-2 transmission in Hunan Province needs to be identified, and a deeper epidemiological investigation of these infected individuals should be conducted as soon as possible. The clinical symptoms of these cases should be closely monitored, and the risk assessment of the spread of transmission should be strengthened to prevent further spread of the HIV-2 epidemic. There is a risk of HIV-2 local transmission in China, and the government should pay attention to it.

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