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HIV INFECTION IN CHINA
EPIDEMIOLOGY
AND ACCESS TO ANTIRETROVIRAL THERAPIES

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HIV infection in China

Since the first case of AIDS was diagnosed in China in 1985, the epidemic, long ignored, has progressed considerably. Before 1995, national surveillance of HIV was mainly based on a passive system of reporting cases, under which doctors were supposed to report all cases of HIV/AIDS diagnosed, and local epidemiological surveys associated with an independent national system of behavioural analysis.

In 2011, the Chinese government set up a national HIV sentinel surveillance scheme (HSS), with 1888 sentinel sites, a system for reporting cases of HIV/AIDS and specific epidemiological surveys. This new system was the subject of external assessment which confirmed it was suitable for monitoring HIV and epidemic trends for different population groups. This study recommended reinforcement of the training and supervision of personnel involved, periodic revision of the national directives and adaptation at a local level, as well as the reinforcement of coordination between government organisations.
In spite of the low national prevalence of 0.058%, the estimated number of people living with HIV/AIDS (PLWHA) was about 800,000 in 2011, including 50,000 who were newly infected. The epidemic predominantly affects subjects under the age of 30 and is more concentrated in the south-west of China and the autonomous region of Xinjiang. A meta-analysis of 45 studies looked at the risk factors for acquiring HIV, which were found to be identical to the factors recorded in other countries affected by the pandemic. Injecting drug users (IDU) remain a key population, male drug addicts being one and a half times more likely to be infected in high-prevalence areas (Yunnan, Guizhou, Sichuan, Guangxi and Xinjiang), whereas female drug addicts were twice as likely to be infected in low-prevalence areas, and IDUs who are members of ethnic minorities had a 3-fold excess risk of infection (OR). Sexual contact was involved in 68% of new cases in 2010, with HIV prevalence among female sex workers (FSW) higher (0.36%) than in the general population. Intravenous drug use by FSWs aggravates this excess risk of infection (OR of 8 to 9) as well as the risk of HCV and HBV, with an HIV prevalence of 12.55% among FSW-IDUs. Recently, the epidemic has increased dramatically in men who have sex with men (MSM), representing 29% of new infections in 2011, compared to 12% in 2007 whereas the proportion of new infections in IDUs fell from 42% to 18% from 2007 to 2011. Prevalence is also affected by sexually transmitted diseases such as syphilis, which are associated with a 3-fold excess risk of HIV infection, and by precarious working conditions (hairdressing salons, massage parlours, small hotels or the street). Urbanisation seems to be hastening the spread of HIV in China, particularly the rural exodus and increasing mobility. Migrants in cities had a 6.7 times higher risk of getting HIV than the general population, with an even higher risk for migrant women and MSM. Finally, socioeconomic status also influences the rate of infection, in particular low educational level, as is the case everywhere in the world.

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HIV infection in China

Access to antiretroviral therapies (ART) in China has long been a grey area. A pilot programme was set up in 2002 for former plasma donors that were infected by HIV in the middle of the 1990s due to inadequate plasmapheresis procedures in Central China. Since 2003, China has accelerated its national free antiretroviral treatment programme (NFATp). In June 2010, the WHO and UNAIDS recommended widening access to HIV screening and antiretroviral therapies (ART). Enormous efforts have been made to develop an ability to treat large numbers of people across wide geographical areas, including training health workers in rural areas. Under the NFATp, antiretroviral treatment begins after an assessment that includes a CD4 cell count, a complete blood count, transaminase levels, a tuberculosis test and HBV and HCV serology tests. From 2003 to 2012, the recommendation was to treat only when the CD4 cell count was below 200 cells/mm3; this threshold was increased to 350 cells/mm3 in 2012 then to 500 cells/mm3 in 2014, in line with WHO guidelines. However, in spite of the extension of HIV programmes to all of China in the last decade, the proportion of HIV-positive patients receiving treatment remains low as the CD4 cell count is only offered after an HIV diagnosis confirmed by Western blot, which leads to a operational delay in initiating ART. In 2009, it was estimated that only 53% of HIV-positive subjects had had a CD4 cell count within 6 months of diagnosis and that treatment coverage of patients eligible for ART was only 63%, with a death rate of 14 per 100 person-years. The CD4 cell count, progression of the disease, TB status and HBV and HCV co-infections are also taken into consideration when initiating ART, which is also recommended for pregnant women, serodiscordant couples or those with active TB or chronic hepatitis, regardless of the CD4 cell count. Monitoring of patients under ART includes a CD4 cell count every 6 months, a plasma viral load test at least once a year, monthly monitoring of liver function for six months and every 6 months after that.

In the event of co-infection with HCV, the decision to treat is made on the basis of the CD4 cell count and liver function, and anti-HCV treatment is recommended before starting ART in the event of elevated liver enzymes, favouring the least hepatotoxic ART. At the beginning of 2014, approximately 282,000 patients had received free ART across the country. From a public health standpoint, this national free ART programme set up in 2003 led to a reduction in HIV infection rates in serodiscordant heterosexual couples of 2.13 per 100 person-years, falling to 1.44 per 100 person-years after it was introduced.

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One American-Chinese study carried out in healthcare establishments in Guangxi has demonstrated the efficacy of a simplified intervention followed by early starting of treatment. The study included two phases and a total of 1,034 HIV-positive participants were monitored for 6-18 months. In the pre-intervention phase in 2010-2011, patients screened as HIV-positive underwent the standard process. Availability of initial CD4 results within 30 days of confirming HIV infection increased from 67% to 98% and the time between confirming HIV and starting ARVs fell by 53 days. Patients started on ARV treatment increased from 27% to 91% in all cases and from 39% to 94% when the CD4 cell count was below 350 cells/mm3 or in the case of AIDS. The death rate fell from 27% to 10% in all cases and from 40% to 13% when the CD4 cell count was below 350 cells/mm3 or in the case of AIDS.
In the post-intervention phase in 2012-2013, patients screened as HIV-positive were offered an immediate confirmation test, a concurrent CD4 cell count and immediate start of ARVs, whatever the CD4 cell count. The intervention led to a reduction by a factor of 3 in the death rate compared to the 1st phase. The extra unit cost attributable to the intervention for a patient receiving ART was $83.80. The unit cost of a death avoided thanks to the intervention was $234.52. The outcomes of this study showed that simplified testing procedures followed by therapeutic intervention promotes greater commitment to treatment and a 62% reduction in the death rate, thereby supporting integrated HIV screening and immediate access to ART, regardless of the CD4 cell count, in order to optimise the impact of the ARVs.

POINT OF VIEW

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INSURABILITY OF HIV INFECTION

Over the last 15 years, enormous progress has been made in the treatment of people infected with HIV.

The main factors that have contributed to this improvement are:

- Early screening,
- Access to antiretroviral drugs,
- Regular medical follow-up,
- Better compliance with treatment (i.e. taking the treatment prescribed regularly and correctly).

Individual risk is assessed by counting CD4+ cells and measuring viral load, tests that reflect the efficacy of the antiretroviral drugs.

The insurability of HIV-positive people therefore depends on all these factors, which must be stable over time.

CONCLUSION

It is encouraging to see the positive impact of the national scheme providing free access to antiviral therapies (ART), which has not only brought down mortality and morbidity but has also reduced the risk of contamination.

POINT OF VIEW

Mark Li
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INSURANCE MARKET OF CHINA

In 2009, the Insurance Association of China (IAC) announced the "Model Formulation of Partial Terms of Life Insurance Product Contracts", which cancelled exclusions for insured persons who suffer from AIDS, or are infected by HIV. Since then, all life and personal accidental products cannot use this term as an exclusion. For critical illness (CI) products, all insurers still use HIV/AIDS as a basic exclusion, but most of the CI products available cover some HIV/AIDS conditions, such as HIV infection caused by the transfusion of blood, and/or HIV/AIDS acquired from occupational exposure. For medical expense reimbursement products, some products use an HIV/AIDS exclusion, others don't, the difference is mainly based on each products' strategy and pricing assumption. Generally, if a product targets high-end customers, it will cover non pre-existing conditions of HIV/ADIS.

At present, the market in mainland China doesn't supply specific insurance products for persons with HIV/AIDS as these persons are not significant consumers of insurance in this market. On the underwriting side, HIV tests are required for applicants with high levels of applied coverage, especially for life and CI products. To date, cases with positive insurance HIV tests are very rare in this market and, usually, applicants with positive HIV tests will be declined.

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