HIV/AIDS surveillance is conducted in Japan as a part of the National Epidemiological Surveillance of Infectious Disease, which is in compliance with the Law Concerning the Prevention of Infectious Diseases and Medical Care for Patients of Infections. Doctors diagnosing HIV infection/AIDS in patients are obligated to notify the cases (to a nearby health center) as per the criteria stated by the Ministry of Health, Labour and Welfare, Japan (http://www.mhlw.go.jp/bunya/kenkou/kekkaku-kansenshou11/01.html [in Japanese]). The criteria consist of indicator diseases such as specific fungal, protozoan, bacterial, and viral infections; specific tumors; and HIV-related encephalopathy and wasting syndrome. CD4 counts or viral load is not a part of these criteria.

Under this system, patients in whom HIV infection is detected before the development of the AIDS indicator diseases are reported as “HIV,” and patients in whom the HIV infection is detected after development of the indicator diseases are reported as “AIDS.” Once a patient has been reported as “HIV,” the patient is not reported as “AIDS” at a later stage, even if the HIV-infected patient subsequently develops the symptoms of AIDS. All these data are accessible through the reports of the National AIDS Surveillance Committee released by the Specific Disease Control Division, the Ministry of Health, Labour and Welfare (2) (http://api-net.jfap.or.jp/htmls/frameset-03-02.html), or on the Infectious Agents Surveillance Report (IASR) home page (2).

Figure 1 shows the cumulative number of cases of “HIV” and “AIDS” in the Japanese population from 1987 to 2009. The cases were categorized according to the gender of the patients and the infection routes, i.e., male homosexuals, male heterosexuals, and females. Figure 2 has been derived from Fig. 1 by plotting the cumulative number of “AIDS” on the Y axis and that of “HIV” on the X axis. In this figure, the leftmost plot for each category corresponds to the year 1987, and the rightmost plot for each category corresponds to the year 2009. All the plots follow a near straight line. In case of male heterosexuals, the slope was 5/6, and in case of male homosexuals and females the slope was 2/7. This difference in the slope between the two groups is distinct, and the reason for this difference is intriguing.

The difference may be explained by the lag in the clinical manifestation of AIDS (the median time of clinical latency is about 10 years after infection) in HIV patients (3). According to the report by the National AIDS Surveillance Committee (1), “HIV” in homosexuals started to increase significantly around the year 1999. Therefore, the curve of the plot could become relatively flat for the succeeding 10 years. However, in reality, the flat curve of the plot for male homosexuals was observed even before 1999 (Fig. 2). Furthermore, the curve of the plot for the females could be superimposed perfectly on the curve of the plot for the male homosexuals, even though the females did not exhibit similar episode of increase in the number of “HIV”. Thus, the lag in the clinical manifestation of AIDS does not explain the flat curves of the two groups—male homosexuals and females. Another explanation could be that HIV-infected male homosexuals and females consulted physicians at a higher rate than male heterosexuals before the clinical manifestation of AIDS. One possible such situation is that male homosexuals and females are more conscious...
of the risk of HIV infection than male heterosexuals, and hence, they visit physicians more frequently. Another possible case, which is more interesting, is that pre-AIDS symptoms are more severe in the case of both male homosexuals and females, and therefore, they are obliged to visit the clinics for consultation. Interestingly, compared to male heterosexuals, females, and male homosexuals are receptive in the act of sexual intercourse and are exposed to a higher viral dose for a longer time (male-to-female viral transmission is about 8 times more efficient than female-to-male transmission) (3). The initial high viral dose may result in a higher level of steady-state viremia (viral set point), and consequently, in more severe pre-AIDS symptoms, which may oblige the patients to visit clinics for consultations. Comparison of clinical symptoms of the two groups, i.e., male homosexuals/females versus male heterosexuals, at their first visit to clinics may clarify as to which of the alternatives is more plausible.

Conflict of interest None to declare.

REFERENCES

