

The TB/HIV Registry

Surveillance Report
on TB/HIV co-infection in Hong Kong
(2007)

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TB-HIV Registry

A total of 47 cases with TB-HIV co-infection were reported from various sources to the TB-HIV Registry in 2007. Thirty-seven (78.7%) were under the care of TB & Chest Service (TB&CS) and/or Special Preventive Programme (SPP), Public Health Services Branch, Department of Health (DH). Most of the remaining cases attended dual follow up at chest clinics and one of the hospitals under Hospital Authority (HA).

Table 1 shows the total number of TB-HIV cases reported to the TB-HIV Registry for the years 1996-2007.

Table 2 shows the data on TB as primary AIDS-defining illness in the Hong Kong HIV/AIDS reporting system for the years 1996-2007. Out of a total of 79 AIDS cases newly diagnosed in 2007, 32 (40.5%) had TB as a primary AIDS-defining illness, compared to 27 (37.0%) for *Pneumocystis jiroveci* pneumonia (previously named *Pneumocystis carinii* pneumonia). In other words, as in 2005, TB overtook *Pneumocystis jiroveci* pneumonia as the most common primary AIDS-defining illness in Hong Kong in 2007. The high burden of latent TB infection in Hong Kong, increased HIV test coverage and increased prophylaxis for *Pneumocystis jiroveci* pneumonia could have been contributory factors. DH will continue to monitor the trend and pattern of AIDS-defining illnesses in newly diagnosed AIDS patients locally.

Table 3 shows the distribution of ADI criteria among 228 cases reported from chest clinics and SPP for the years 1996-2007 with TB as the primary AIDS-defining illness. In Hong Kong, both pulmonary TB with a CD₄ count below 200/μl and extra-pulmonary TB are included in the AIDS case definition. The relative proportion of the two forms of TB as primary AIDS-defining illness has remained rather static in the past few years.

The pre-treatment drug sensitivity pattern among culture-positive (sputum or other specimens) TB-HIV cases for the years 1996-2007 is shown in Table 4. The rate of MDR-TB (4/250 or 1.6%) among the reported HIV cases was somewhat higher than that in the general population, but the absolute number of MDRTB associated with HIV infection was small. There is no XDR-TB cases detected among the reported TB-HIV cases. DH will continue to monitor prevalence of drug resistance in the context of HIV.

Table 5 shows the characteristics of 37 patients reported from chest clinics and SPP in 2007. The characteristics of these patients are similar to that of the 2006 cohort, namely, there are greater proportions of young males and non-Chinese Asians among TB-HIV co-infected patients as compared to non-HIV infected TB patients. CD₄ count was generally low at time of TB diagnosis. TB-HIV co-infected patients with pulmonary involvement tend to have more extensive disease and a positive bacteriology, and extra-pulmonary involvement is common.

Table 1. Total number of TB-HIV cases reported to TB-HIV Registry (1996-2007)*

Year	Number of TB-HIV cases**
1996	22
1997	19
1998	22
1999	25
2000	24
2001	34
2002	21
2003	26
2004	34
2005	42
2006	44
2007	47
Total	360

* Including cases reported from chest clinics, SPP, HA hospitals and private centres.

** Some of the figures in the table for the previous years have been updated after taking out some mismatched cases and cases with a revised diagnosis.

Table 2. TB as AIDS-defining illness in Hong Kong HIV/AIDS reporting system (1996-2007)*

Year	Number of cases with TB as primary AIDS-defining illness	Total number of reported AIDS cases	% of reported AIDS cases with TB as primary AIDS-defining illness
Pre-1996	21	175	12.00%
1996	21	70	30.00%
1997	17	64	26.56%
1998	18	63	28.57%
1999	13	61	21.31%
2000	19	67	28.36%
2001	17	60	28.33%
2002	9	53	16.98%
2003	15	56	26.79%
2004	13	49	26.53%
2005	25	64	39.06%**
2006	26	73	35.62%
2007	32	79	40.51%**
Total	246	934	26.34%

* An expanded case definition was adopted in 1995 to include pulmonary TB cases with a CD4 count less than 200/ μ l.

** TB overtook *Pneumocystis jiroveci* pneumonia as the most common AIDS-defining illness.

Table 3. Criteria for TB as AIDS-defining illness among 228 cases reported from chest clinics and SPP (1996-2007)*

Year	TB as AIDS-defining illness			Total
	Yes		No	
	Extra-pulmonary	Pulmonary and TB cervical lymph node with CD4 < 200 µl		
1996	1	7	1	9
1997	2	3	2	7
1998	6	3	3	1
1999	7	6	3	216
2000	3	4	5	12
2001	4	6	7	17
2002	4	9	2	15
2003	1	10	5	16
2004	5	7	11	23
2005	8	14	7	29
2006	9	19	7	35
2007	10	17	8	37**
Total	60	105	61	228

* Among 382 cases reported to the TB-HIV Registry from 1996 to 2007, 228 cases were seen at chest clinics and/or SPP. The table is compiled basing on data of these 228 cases.

** Information on TB as AIDS-defining illness not available in two patients.

Table 4. Pre-treatment drug sensitivity pattern among culture positive (sputum and/or other specimens) TB-HIV cases from TB-HIV Registry (1996-2007)*

Year	Susceptible to SHRE	Any resistance** (non-MDR/XDR)	MDR	XDR	Total number of culture positive cases
1996	7	1	0	0	8
1997	5	1	0	0	6
1998	13	1	0	0	14
1999	16	4	1	0	21
2000	13	2	0	0	15
2001	23	5	0	0	28
2002	11	3	1	0	15
2003	18	3***	0 (+1)***	0	21
2004	20	6	0	0	26
2005	29	5	0	0	34
2006	32	3	0	0	35
2007	20	6	1	0	27
Total	207	40	3 (+1)***	0	250

* Among 382 cases reported to the TB-HIV Registry from 1996 to 2007, 250 had a positive culture (sputum or other specimens). The table is compiled basing on data of these 250 cases.

** Any pattern of drug resistance except MDR (i.e. resistant to at least both H and R) and XDR (i.e. resistance to any fluoroquinolones, and at least one of the injectable drugs, in addition to MDR).

*** One of these patients had extremely poor treatment adherence, developed acquired resistance during anti-TB treatment and became MDR-TB.

Table 5: Characteristics of 37 TB cases reported from chest clinics and SPP in 2007*

	Number	Proportion
Age distribution		
0 to 19	0	0.00%
20 to 39	13	35.14%
40 to 59	15	40.54%
60+	9	24.30%
Sex distribution		
Male	32	86.49%
Female	5	13.51%
Ethnicity		
Chinese	28	75.68%
Asians, non-Chinese	8	21.62%
Caucasians	0	0.00%
Others	1	2.70%
Case category		
New case	35	94.59%
Relapse	2	5.41%
Treatment after default	0	0.00%
Failure of previous treatment	0	0.00%
TB as primary AIDS defining illness		
Yes	27	72.97%
No	8	21.62%
Missing	2	5.41%
HIV stage		
A1	0	0.00%
A2	3	8.11%
A3	1	2.70%
B1	0	0.00%
B2	2	5.41%
B3	1	2.70%
C1	0	0.00%
C2	2	5.41%
C3	22	59.46%
Unknown	6	16.22%
CD4 count at time of co-infection (median, range)	62 (3-362)/ μ l	
Viral load at time of co-infection (median, range)	250000 (400-2300000) copies/ml	
Anti-retroviral therapy at time of co-infection		
Yes	3	8.11%
No	34	91.89%
Presence of extra-pulmonary TB		
Yes	23	62.16%
No	14	37.83%
Extent of Respiratory TB**		
Minimal	14	48.28%
Moderate	6	20.69%
Extensive	9	31.03%
Bacteriological status (pre-treatment)		
Smear + culture +	19	51.35%
Smear - culture +	11	29.73%
Smear + culture -	1	2.70%
Smear - culture -	6	16.22%
Drug resistance pattern (pre-treatment)***		
Susceptible to SHRE	23	76.67%
Resistant to at least any one drug of SHRE		
Any resistance (non-MDR)	6	20.00%
MDR	1	3.33%
XDR	0	0%

* Among 47 cases reported to HIV Registry in 2007, 37 were managed at chest clinics and/or SPP. The table is compiled basing on data of these 37 cases.

** 29 out of the 37 cases had lung parenchymal lesion on CXR.

*** 30 out of the 37 cases had a positive sputum or other specimen culture.