

The TB/HIV Registry

Surveillance Report on TB/HIV co-infection in Hong Kong (2006)

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TB-HIV Registry

A total of 44 cases with TB-HIV co-infection were reported from various sources to the TB-HIV Registry in 2006. Thirty-three (75.0%) were under the care of both TB & Chest Service (TB&CS) and 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 1985-2006.

Table 2 shows the data on TB as primary AIDS-defining illness in the Hong Kong HIV/AIDS reporting system for the years 1985-2006. Out of a total of 73 AIDS cases newly diagnosed in 2006, 26 (35.6%) had TB as a primary AIDS-defining illness, compared to 27 (37.0%) for *Pneumocystis carinii* pneumonia (PCP). In other words, TB was just second to PCP as the most common primary AIDS-defining illness in Hong Kong for 2006. The high burden of latent TB infection in Hong Kong and the increasing proportion of TB patients offered HIV antibody test at chest clinics could have been contributory factors. DH will continue to monitor the trend and pattern of AIDS-defining illnesses in newly diagnosed AIDS patient locally.

Table 3 shows the distribution of ADI criteria among 183 cases reported from chest clinics and SPP for the years 1996-2006 with TB as the primary AIDS-defining illness. In Hong Kong, both pulmonary TB with a CD4 count below 200/ μ l 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 1996-2006 is shown in Table 4. Although the rate of MDR-TB among the reported TB-HIV cases (3/223 or 1.34%) is currently low, and there is no XDR-TB cases detected so far, drug resistance in the context of HIV should be carefully monitored.

Table 5 shows the characteristics of 33 patients reported from chest clinics and SPP in 2006. The characteristics of these patients are similar to that of the 2005 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 is 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.

TB-HIV Registry

Table 1: Total number of TB-HIV cases reported to TB-HIV Registry, 1985-2006*

	Pre-1994	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Total
Number of TB-HIV cases	24	11	14	25	23	23	31	31	35	21	27	33	42	44	384

* include cases reported from chest clinics and other DH clinics, HA hospitals, SPP and private sectors

Table 2: TB as AIDS defining illness in the Hong Kong HIV/AIDS reporting system, 1985 - 2006*

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Total
Mycobacterium tuberculosis infection	0	--	0	0	1	2	3	1	2	4	8	21	17	18	13	19	17	9	15	13	25	26	214
Total number of reported AIDS cases	3	--	6	7	17	13	14	14	19	37	45	70	64	63	61	67	60	53	56	49	64	73	855
TB as AIDS defining illness	0.00%		0.00%	0.00%	5.90%	15.40%	21.40%	7.10%	10.50%	10.80%	17.80%	30.00%	26.60%	28.60%	21.30%	28.40%	28.30%	17.00%	26.80%	26.50%	39.1%#	35.60%	25.00%

* An expanded case definition was adopted in 1995 to include pulmonary TB cases with a CD4 count below 200/μl.

TB surpassed Pneumocystis carinii pneumonia (PCP) as the most common AIDS defining illness

Table 3: TB as AIDS defining illness criteria for 183 cases reported from chest clinics and SPP, 1996-2006*

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Total
TB as AIDS defining illness												
Yes	8	5	9	13	5	9	13	6	12	23	26	129
Pulmonary TB	1	2	6	7	2	3	4	1	5	9	8	48
Extra-pulmonary TB	7	3	3	6	3	6	9	5	7	14	18	81
Pulmonary TB with CD4 count below 200/μl	1	2	3	4	5	7	2	5	11	7	7	54
Total	9	7	12	17	10	16	15	11	23	30	33	183

*Among 321 cases reported to the TB-HIV Registry from 1996 to 2006, 183 cases were seen at chest clinics and/or SPP. The table is compiled basing on data of these 183 cases.

Table 4: Pre-treatment drug sensitivity pattern among culture positive (sputum or other specimens)TB-HIV cases from TB-HIV Registry, 1996 -2006*

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Total
Susceptible to SHRE	7	5	13	16	13	23	11	18	20	29	32	187
Resistant to at least any one drug of SHRE												
Any resistance ** (non-MDR/XDR)	1	1	1	4	2	5	3	3***	6	5	3	34
MDR	0	0	0	1	0	0	1	0(+1)***	0	0	0	2(+1)***
XDR	0	0	0	0	0	0	0	0	0	0	0	0
Total number of culture positive cases	8	6	14	21	15	28	15	21	26	34	35	223

* Among 335 cases reported to HIV Registry from 1996 to 2006, 223 had a positive culture (sputum or other specimens). The table is compiled basing on data of these 223 cases.

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

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

(Footnote: Some of the figures in the tables for the previous years have been slightly revised to include 14 cases from SPP not included in TB-HIV Registry before.)

Table 5: Characteristics of 33 TB cases reported from chest clinics and SPP in 2006*

	Number	Proportion
Age distribution		
0 to 19	0	0.00%
20 to 39	14	42.40%
40 to 59	14	42.40%
60+	5	15.20%
Sex distribution		
Male	32	97.00%
Female	1	3.00%
Ethnicity		
Chinese	25	75.80%
Asians, non-Chinese	7	21.20%
Caucasians	0	0.00%
Others	1	3%
Case category		
New case	29	87.90%
Relapse	4	12.10%
Treatment after default	0	0.00%
Failure of previous treatment	0	0%
TB as primary AIDS defining illness		
Yes	26	78.80%
No	7	21.20%
HIV stage		
A1	0	0.00%
A2	1	3.00%
A3	3	9.10%
B1	0	0%
B2	1	3.00%
B3	0	0.00%
C1	0	0%
C2	3	9.10%
C3	22	66.70%
missing	3	9.10%
CD4 count at time of co-infection (median, range)	111 (12-356)/ μ l	
Viral load at time of co-infection (median, range)	190000 (400-730000) copies/ml	
Anti-retroviral therapy at time of co-infection		
Yes	3	9.10%
No	30	90.90%
Presence of extra-pulmonary TB		
Yes	24	72.70%
No	9	27.30%
Extent of Respiratory TB**		
Minimal	13	48.10%
Moderate	5	18.50%
Extensive	9	33.30%
Bacteriological status (pre-treatment)		
Smear + culture +	18	54.50%
Smear - culture +	9	27.30%
Smear - culture -	4	12.10%
Incomplete	2	6.10%
Drug resistance pattern (pre-treatment)***		
Susceptible to SHRE		
Resistant to at least any one drug of SHRE	24	88.90%
Any resistance (non-MDR)	3	11.10%
MDR	0	0%
XDR	0	0%

* Among 44 cases reported to HIV Registry in 2006, 33 were managed at chest clinics and/or SPP. The table is compiled basing on data of these 33 cases.

**27 out of the 33 cases had lung parenchymal lesion on CXR

***27 out of the 33 cases had a positive sputum or other specimen culture