

The TB/HIV Registry

Surveillance Report on TB/HIV co-infection in Hong Kong (2005)

Tuberculosis & Chest Service / Special Preventive Programme
Public Health Services Branch
Centre for Health Protection
Department of Health
Hong Kong

TB-HIV Registry

The TB-HIV Registry is a registry kept jointly by the TB & Chest Service (TB&CS) and Special Preventive Programme (SPP), Public Health Services Branch, Department of Health (DH), for surveillance purposes. The registry include any cases of TB-HIV co-infection voluntarily reported from chest clinics and other DH clinics, SPP, Hospital Authority (HA) hospitals, and the private sector. About 60% of the cases were under the care of both TB&CS and SPP. Surveillance data are generally more complete for these cases. Most of the remaining cases were seen at chest clinics and one of the HA hospitals.

Table 1 shows the total number of TB-HIV cases reported to the Registry for the years 1985-2005.

Table 2 shows the data on TB as primary AIDS-defining illness in the Hong Kong HIV/AIDS reporting system for the years 1985-2005. TB has increasingly become a more frequent AIDS-defining illness among AIDS patients in Hong Kong. It accounted cumulatively for 24.0% of the AIDS-defining illnesses of all reported AIDS cases. In 2005, 39.1% of the newly diagnosed AIDS patients had TB as the primary AIDS-defining illness, and TB surpassed *Pneumocystis carinii* pneumonia (PCP) as the most common AIDS-defining illness. The exact reason for the change is not certain, even though such trend is also observed in other places with a burden of latent TB infection. Further monitoring of the trend and pattern is therefore necessary.

Table 3 shows the distribution of cases with TB as the primary AIDS-defining illness for 150 cases reported from chest clinics and SPP for the years 1996-2005.

Table 4 shows the pre-treatment drug sensitivity pattern among culture-positive (sputum or other specimens) TB-HIV cases for the years 1996-2005. At present, the rate of MDR-TB among the reported TB-HIV cases (3/182 or 1.6%) is low, and is only slightly higher than the MDR-TB rate of around 0.61% to 1.23% among all reported TB cases from 2000 to 2005. The actual number of MDRTB cases among TB-HIV co-infected patients, however, was small, and the result has to be interpreted with caution. There is no XDR-TB cases detected among the TB patients reported to the TB-HIV Registry during the period.

Table 5 shows the characteristics of 30 TB cases reported from chest clinics and SPP in 2005. There are greater proportions of young males and non-Chinese Asians among TB-HIV co-infected patients as compared to the non-HIV infected counterparts. Most are new cases of TB. Relapse cases and cases with re-treatment after default accounted for about 10% of the cases. Only about 20% of the patients were receiving anti-retroviral therapy at time of diagnosis of active TB. CD4 count is generally low. TB-HIV co-infected patients with pulmonary involvement tend to have more extensive disease and a positive bacteriology. Extra-pulmonary involvement, with or without pulmonary involvement, is common, and is present in 53% of the patients in this cohort.

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Table 1: Total number of TB-HIV cases reported to TB-HIV Registry, 1985-2005*

	Pre-1994	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
Number of TB-HIV cases	24	11	14	24	22	22	30	31	34	20	23	29	42	326

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

Table 2: TB as primary AIDS-defining illness in the Hong Kong HIV/AIDS reporting system, 1985-2005*

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
Mycobacterium tuberculosis infection	0	--	0	0	1	2	3	1	2	4	8	21	17	18	13	19	17	9	15	13	25	188
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	782
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%#	24.00%

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

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

Table 3: TB as primary AIDS-defining illness criteria for 150 cases reported from chest clinics and SPP, 1996-2005*

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
TB as AIDS defining illness											
Yes	8	5	9	13	5	9	13	6	12	23	103
Extra-pulmonary TB	1	2	6	7	2	3	4	1	5	9	40
Pulmonary TB with CD4 count below 200/ μ l	7	3	3	6	3	6	9	5	7	14	63
No	1	2	3	4	5	7	2	5	11	7	47
Total	9	7	12	17	10	16	15	11	23	30	150

* Among 277 cases reported to the TB-HIV Registry from 1996 to 2005, 150 cases were seen at both chest clinics and SPP. The table is compiled basing on data of these 150 cases.

Table 4: Pre-treatment drug sensitivity pattern among culture-positive (sputum or other specimens) TB-HIV cases from TB-HIV Registry, 1996-2005*

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
Susceptible to SHRE	6	5	13	15	13	23	11	17	18	29	150
Resistant to at least any one drug of SHRE											
Any resistance (non- MDR)	1	1	1	4	2	4	3	2	6	5	29
MDR	0	0	0	1	0	0	1	1	0	0	3
XDR	0	0	0	0	0	0	0	0	0	0	0
Total number of culture-positive cases	7	6	14	20	15	27	15	20	24	34	182

* Among 277 cases reported to HIV Registry from 1996 to 2005, 182 had a positive culture (sputum or other specimens). The table is compiled basing on data of these 182 cases.

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Table 5: Characteristics of 30 TB cases reported from chest clinics and SPP in 2005*

	Number	(%)
Age distribution		
0 to 19	0	0.00%
20 to 39	14	46.70%
40 to 59	11	36.70%
60+	5	16.60%
Sex distribution		
Male	23	76.70%
Female	7	23.30%
Ethnicity		
Chinese	25	83.40%
Asians, non-Chinese	4	13.30%
Caucasians	1	3.30%
Others	0	0%
Case category		
New case	27	90.00%
Relapse	2	6.70%
Treatment after default	1	3.30%
Failure of previous treatment	0	0%
TB as primary-AIDS defining illness		
Yes	23	76.70%
No	7	23.30%
HIV stage		
A1	1	3.30%
A2	3	10%
A3	0	0%
B1	0	0%
B2	2	6.70%
B3	1	3.30%
C1	0	0%
C2	0	0%
C3	23	76.70%
CD4 count at time of co-infection		
[median (range)]	65 (3-554) / μ l	
Viral load at time of co-infection		
[median (range)]	210000 (400-3900000) copies/ml	
Anti-retroviral therapy at time of co-infection		
Yes	6	20%
No	24	80%
Presence of extra-pulmonary TB	16	53%
Extent of Respiratory TB**		
Minimal	9	40.90%
Moderate	7	31.80%
Extensive	6	27.30%
Bacteriological status (pre-treatment)		
Smear + culture +	12	40%
Smear - culture +	11	36.70%
Smear - culture -	7	23.30%
Incomplete	0	0%
Drug resistance pattern (pre-treatment)***		
Susceptible to SHRE	19	82.60%
Resistant to at least any one drug of SHRE		
Any resistance (non-MDR)	4	17.40%
MDR	0	0%
XDR	0	0%

* Among 42 cases reported to HIV Registry in 2005, 30 were managed at chest clinics and/or SPP. The table is compiled basing on data of these 30 cases.

** 22 out of the 30 cases had lung parenchymal lesion on CXR.

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