Multi-drug resistant tuberculosis (MDR TB) in Belgium, 2001-2006

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90 cases of MDR TB were identified in Belgium from 2001 to 2006 (table 1).
Additional drug resistance was frequent (table 2).

1

TB case notification, Belgium, 2001 - 2006

Year	Total cases	MDR	
2001	1321	15	1,14%
2002	1309	22	1,68%
2003	1128	10	0,89%
2004	1226	14	1,14%
2005	1144	10	0,87%
2006	1130	19	1,68%
Total	7258	90	1,24%

2

Results of drug sensitivity testing of 90 MDR patients, Belgium, 2001 - 2006

Drug tested	Number of patients tested	% showing drug resistance
rifampicin	90	100%
isoniazid	90	100%
ethambutol	90	73%
pyrazinamide	53	57%
streptomycin	72	67%
amikacin	73	11%
fluoroquinolone	76	9%
thioamide	63	5%
cycloserin	45	Results unreliable
rifabutin	69	74%
para-amino-salicylic acid	14	79%

Two among the 90 MDR TB cases (3%) were also resistant to both amikacin and the fluoroquinolones and corresponded to the definition of XDR TB (extensively drug resistant TB). One died in 2001, the other one is responding well to treatment and has become culture negative.

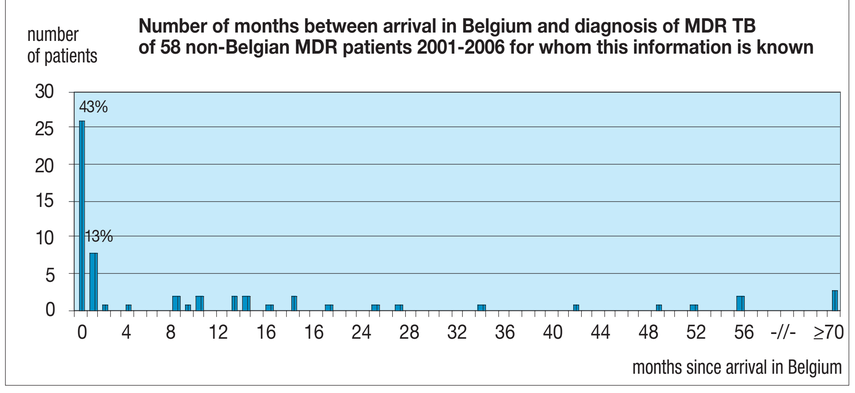
81% of the MDR cases were of non-Belgian origin (table 3). Among them, 61% were asylum seekers and 15% were illegal aliens. Among 56% of the non-Belgian MDR cases with a known date of arrival in Belgium, MDR TB was diagnosed within 1 month of their arrival date (figure 4).

3

Origin of 90 MDR patients, Belgium, 2001-2006

Origin	Number	%
Belgium	17	19%
Eastern Europe	6	7%
Former USSR	24	27%
Asia	13	14%
Africa	25	28%
America	5	6%
Total	90	

4



43% of the MDR patients declared to have had TB in the past (table 5). The median time lapse between the earlier TB episode and the MDR diagnosis was 3 years.

5

Evidence of TB antecedents in the anamnesis of 90 MDR patients in Belgium, 2001 - 2006

TB antecedents	Non-Belgian	Belgian	Total		
No TB antecedents reported	28	10	38	42%	
TB antecedents reported and documented	7(1)	6(2)	13	14%	43%
TB antecedents reported but not documented	26		26	29%	
Unknown	12	1	13	14%	
Total	73	17	90		

(1) In 3 patients, the earlier TB episode was monoresistant to isoniazide. 1 patient had had MDR TB.
(2) In 1 patient, the earlier TB episode was monoresistant to isoniazide.

Among the patients tested, 15% overall were HIV positive (table 6). Ninety percent of the MDR patients suffered from pulmonary TB.

6

HIV status of 60 MDR patients, Belgium 2001-2006, whose HIV status was tested

		Non-Belgian			Belgian
		male	female	total	
Number who were HIV tested		34	19	53	7
HIV positive	Number	3	6	9	0
	(%)	(9%)	(32%)	(17%)	

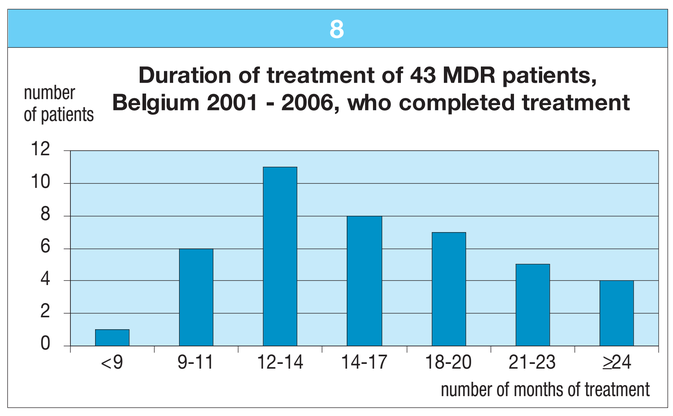
Treatment regimens were determined individually, based on the resistance pattern of each patient. Of the patients no longer on treatment on 01/01/07, 63% had completed treatment (table 7) after a median treatment duration of 17 months (figure 8).

7

Treatment outcome of 68 MDR patients, Belgium 2001-2006, who were no longer on treatment on 01/01/07

	number	%
Treatment completed	43	63.2%
Defaulted	11	16.2%
Died	11	16.2%
Transferred out of the country	3	4.4%
Total	68	

8



Genotyping using RFLP, MIRU-VNTR and spoligotyping was done for 79 (88%) of the 90 MDR strains. Several clusters could be identified but only 2 could be linked to transmission of MDR bacilli in Belgium:

- 2 patients were contaminated through the cleansing liquid of a bronchoscope;
- 3 patients without any TB antecedents were living in the same area, but the MDR diagnoses were made at several years' intervals and no common source of contamination could be established.

So far, Belgium has been successful in preventing MDR TB to become a major public health problem. The following strategies have been found to be helpful:

- All asylum seekers are screened for TB at the time of arrival in Belgium and periodically thereafter.
- An MDR expert committee meets quarterly. It advises on MDR TB control strategies and guidelines for patient management.
- A special project (BELTA-TBnet: see **poster 73141**) has been implemented to ensure maximum accessibility to MDR TB treatment: all TB drugs are provided free of charge to all patients, irrespective of their nationality or their social security coverage.

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