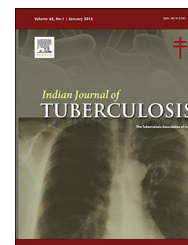


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## Case Report

# Multidrug-resistant tuberculosis among different types of suspected cases: Study from New Delhi

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## ARTICLE INFO

## Article history:

Received 30 July 2014

Accepted 8 July 2015

Available online 4 November 2015

## Keywords:

Multi-drug resistance

Line probe assay

Mycobacterium

## ABSTRACT

There are limited data of multidrug-resistant tuberculosis (MDR-TB) diagnosed in various patient categories by implementing Programmatic Management of Drug Resistant TB (PMDT) using line probe assay (LPA) from our country. Samples from presumptive MDR-TB from five districts of New Delhi were subjected to LPA from 1st October 2011 to 31st December 2014. The MDR-TB diagnosed in 4th & 5th month follow-up positives were significantly higher than other categories of the patients. Only 3/232 (2.2%) RIF resistants were diagnosed among smear negative re-treatment cases. The data suggest interim cost-benefit analysis of the program especially among smear negatives retreatment cases.

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## 1. Introduction

Multidrug-resistant tuberculosis (MDR-TB) defined as the resistance to at-least rifampicin (RIF) and isoniazid (INH) has become a significant public health problem due to prolonged and expensive treatment resulting in failure and death.<sup>1</sup> Based on drug resistance surveillance studies conducted in 2006–2008, estimated proportion of MDR-TB is 2.1% (1.5–2.7%) and 15% (13%–17%), in new and retreatment cases respectively.<sup>2</sup>

India had launched PMDT under Revised National Tuberculosis Control Programme (RNTCP) in 2011, in which notified

TB patients are identified as “presumptive MDR-TB” based on pre-decided “Criteria” and are further diagnosed for MDR-TB by rapid method.<sup>3</sup> Criterion A includes new TB cases smear positive at 5th month of treatment, re-treatment cases smear positive at 4th month, and all TB contacts of diagnosed MDR-TB case. Criterion B includes all smear positive re-treatment PTB cases at diagnosis or follow-up and any smear positive follow-up in Category I (Smear +ve at 2 months of treatment or later) in addition to Criterion A. Criterion C includes all smear negative re-treatment TB cases and HIV-TB co-infected cases, in addition to Criterion B.<sup>3</sup> All RIF resistants are started with category IV treatment irrespective of INH status.

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<http://dx.doi.org/10.1016/j.ijtb.2015.09.004>

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**Table 1 – Distribution of suspected and diagnosed multidrug-resistant tuberculosis (MDR-TB) as per Programmatic Management of Drug Resistant TB (PMDT).**

Year	Clinical type	Follow up positive at end of 5th month and 4th month, CAT I and CAT II respectively			Follow up positive at end of IP			MDR-TB contacts	CAT II entry smear positive	CAT II entry smear negative	HIV positive	Total	
		CAT I, 5th month	CAT II, 4th month	TOTAL	CAT I, end of IP	CAT II, end of IP	Total						
2011	MDR suspects		40	101	141							142	
	RIF resistance	No.	14	35	49			1				49	
		%	35.00%	34.70%	34.50%			0				34.50%	
	MDR	No.	13	30	43			0				43	
2012	MDR suspects					800	421	1221	0	1160	47	2430	
	RIF resistance	No.				122	60	182	0	175	1	358	
		%				15.20%	14.30%	14.90%		15.10%	2.10%	14.70%	
	MDR	No.				94	49	143	0	136	1	280	
2013	MDR suspects					673	320	993	5	1053	139	2201	
	RIF resistance	No.				83	38	121	2	168	2	293	
		%				12.30%	11.90%	12.20%	40.00%	15.60%	1.40%	13.30%	
	MDR	No.				75	33	108	2	131	2	230	
2014	MDR suspects					348	192	540	13	690	46	1296	
	RIF resistance	No.				41	30	71	4	94	0	171	
		%				11.80%	15.60%	13.10%	30.80%	13.60%	0.00%	13.20%	
	MDR	No.				35	20	55	4	72	0	133	
Total	MDR suspects		40	101	141	1821	933	2754	18	2903	232	6066	
	RIF resistance	No.	14	35	49	246	128	374	6	437	3	871	
		%	35.00%	34.70%	34.50%	13.50%	13.70%	13.60%	33.30%	15.10%	1.30%	11.10%	14.40%
	MDR	No.	13	30	43	210	102	312	6	339	3	705	
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