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**Title:** Drug resistance patterns in patients with multi-drug resistant tuberculosis (MDR – TB)

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**Body:** Introduction: Incidence of drug resistance to Mycobacterium tuberculosis is increasing with with the emergence of Multi Drug Resistant (MDR) and Extensively Drug Resistant (XDR) strains<sup>1</sup>. Aim: To study drug resistance patterns in patients with MDR tuberculosis attending the outpatients' clinic at a tertiary care center. Methodology: Sputum of 32 patients, previously diagnosed as MDR tuberculosis was tested for culture and drug sensitivity to first and second line anti-tubercular drugs by Bactec MGIT 960 TB System <sup>2</sup>. Results: Resistance patterns obtained.

	Pyrazinamide	Ethambutol	Streptomycin	Amikacin	
No. of resistant/ Total Tested	16/20	20/30	18/24	2/12	
% Resistant	80%	66.66%	75%	16.67%	
	Kanamycin	Ofloxacin	Ciprofloxacin	Moxifloxacin	
No. of resistant/Total tested	6/31	11/24	7/8	6/9	
% Resistant	19.35%	50%	87.5%	66.66%	
	PAS	Cycloserine	Capreomycin	Ethionamide	Clofazamine
No. of resistant/Total tested	8/34	11/17	3/12	12/27	1/8
% Resistant	23.53%	64.71%	25%	44.44%	12.5%

A high incidence of drug resistance to first line drugs was noted. Amongst the second line drugs, high percentage of resistance to quinolones, cycloserine and ethionamide was observed. 6/32 (18.75%) patients had XDR TB. Conclusion: The study highlights a very high percentage of drug resistance to first and second line anti tubercular drugs amongst patients with MDR TB. References: 1. WHO Tuberculosis MDR- TB and XDR -TB 2011, progress report. 2. Novel and Improved Technologies for Tuberculosis Diagnosis: Progress and Challenges, Clin Chest Med 30 (2009) 701 - 716.

