



## TREATMENT OUTCOMES AMONG DRUG-RESISTANT CHILDREN BELOW 10 YEARS TREATED WITH NEWER DRUGS, IN MEDECINS SANS FRONTIERS CLINIC IN MUMBAI, INDIA

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### BACKGROUND AND AIMS

- As per the Global TB report, 1.1 million children and young adolescents aged <15 years fall ill with tuberculosis (TB) every year. Children constitute 11% of the total TB burden.
- As per India TB report 2021, 6-7% are paediatric DRTB among the annual TB notification
- The Médecins Sans Frontières (MSF) clinic in Mumbai has been treating paediatric cases with new drugs since 2016.

### METHOD

- Descriptive retrospective observational study on children <10 years old treated with new drugs with and optimised background regimen for DRTB from 2016 to March 2022 in MSF clinic Mumbai, India.
- DRTB was confirmed on molecular test (Xpert and LPA) followed by culture and drug susceptibility testing (DST).
- Patients were given individualized DST based regimens with newer TB drugs (BDQ & or DLM) under compassionate use.
- They received monthly clinical monitoring, outcome was assessed clinical and radiologically after 18-24 months of treatment and post treatment follow-up for a year.

### RESULTS

#### Cohort of 12 children constitutes:

- 100% microbiologically confirmed. 10/12 fluoroquinolone (FQ) resistance
- 10/12 were household contacts of DRTB patients .
- Out of 10 patients with treatment outcomes, 9/12 had successful outcome 2/12 were lost to follow-up. 1 /12 patients was still on treatment .
- 83% (10/12) suffered from Adverse Drug Reactions (ADR). Most ADRs could be managed symptomatically without stopping BDQ /DLM

### RESULTS

**Table1: Description of paediatric cohort**

	Variable	Characteristics	%
<b>Demography</b>	Age (in years)	Median (range)	5 (0-10)
	Sex	Male	33% (4/12)
<b>Baseline information</b>	Site of disease	Female	67% (8/12)
		PTB	58% (7/12)
		LNTB (cervical)	25% (3/12)
	Treatment history	Disseminated TB	17% (2/12)
		New	75% (9/12)
	Nutritional status	Previously treated	25% (3/12)
		Normal	33% (4/12)
Mild (-1SD)		33% (4/12)	
Moderate (-2SD)		25% (3/12)	
	Severe (-3SD)	8% (1/12)	

**Table1: Description of ADR in the paediatric cohort**

ADR	N/%	Management
Vomiting	4/33%	Symptomatic / Stop Pyrazinamide/ Stop Para-aminosalicylic acid (PAS)
Alt behavior	3/25%	Stop Cycloserine
Anemia	3/25%	Linezolid ½ dose / stop Linezolid
QT prolongation grade 1 QT prolongation grade 4	4/33% 1/8%	Monitoring
Hepatotoxicity grade 4-3	4/33%	Stop all Anti tubercular treatment -ATT ( re-challenge after 1week-1month)
Others * (1- Optic Neuritis, 1- Convulsions, 1- Nightmares, 1-Gastritis, 1- Acute renal injury)	5/42%	Stop Linezolid, Cycloserine, Clofazimine, Capreomycin

### CONCLUSION

Good outcomes in FQ resistant children less than 10 years , treated with new drugs Delamanid/Bedaquiline