



DM2 is Associated with Severe Adverse Effects in Drug Resistant Tuberculosis

Marcela Muñoz-Torricono, M.D.

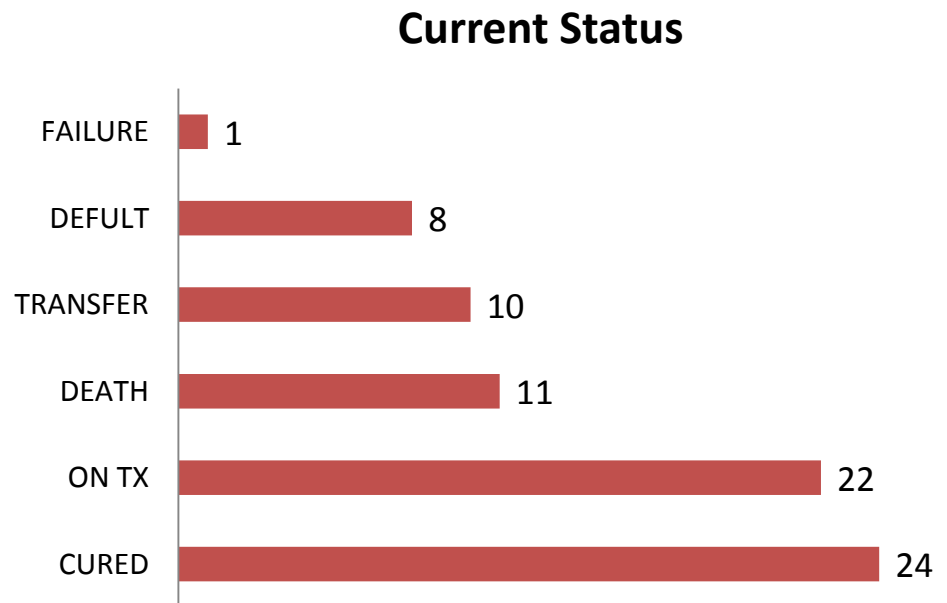


Tuberculosis at INER

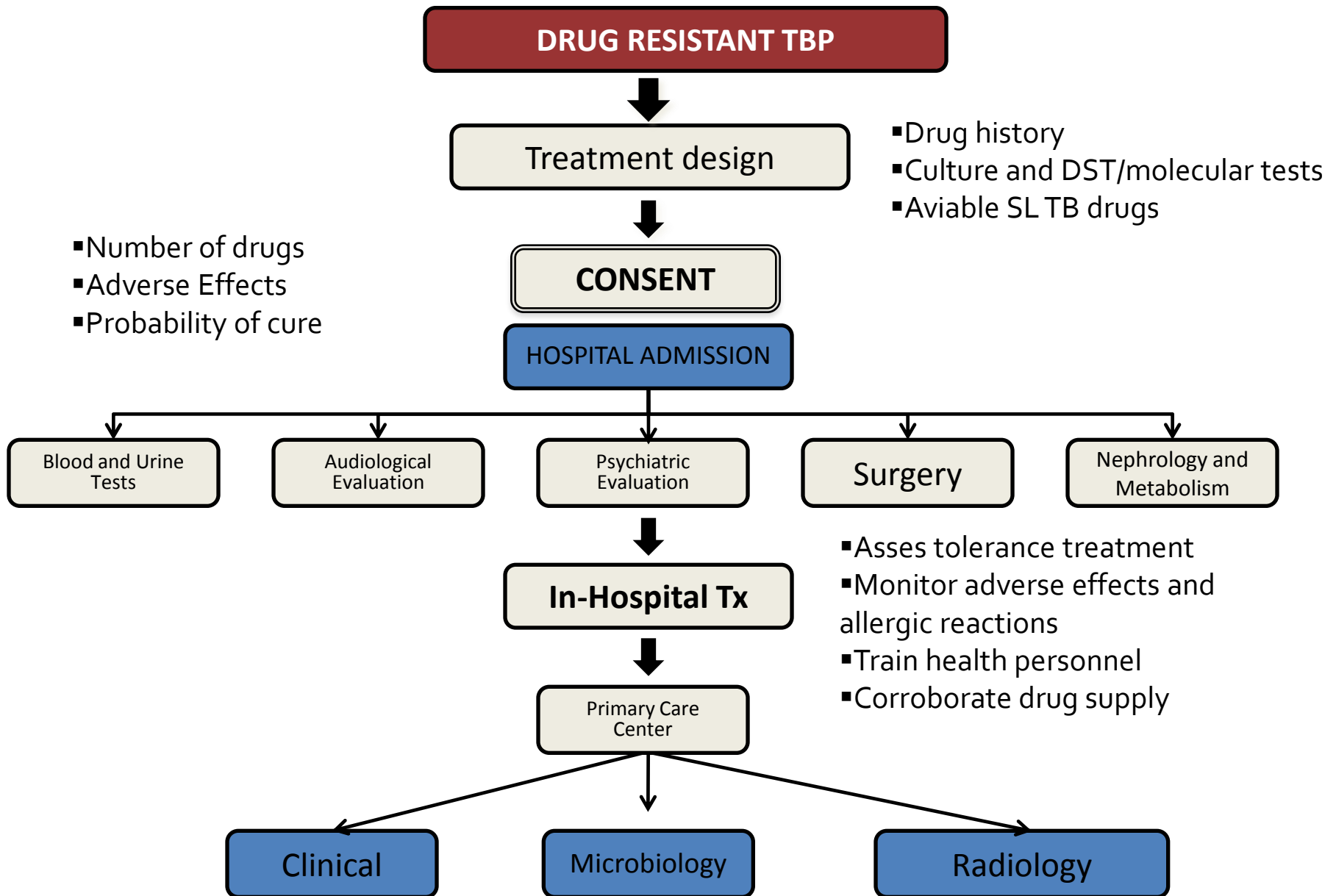
- 1,486 TB patients (2010 – 2014).
 - 1,163 (78%) Pulmonary TB.
 - 320 (22%) Disseminated and Extrapulmonary TB.
 - **92% New cases.**
- HIV associated: 15% (224 patients).
- DM2 associated: 25% (371 patients).

Reported Cases 2010 - 2014

- 63 MDR
- 8 Pre-XDR
 - 7 FQ
 - 1 Cm
- 5 XDR



68% of patients come from another state



Methods

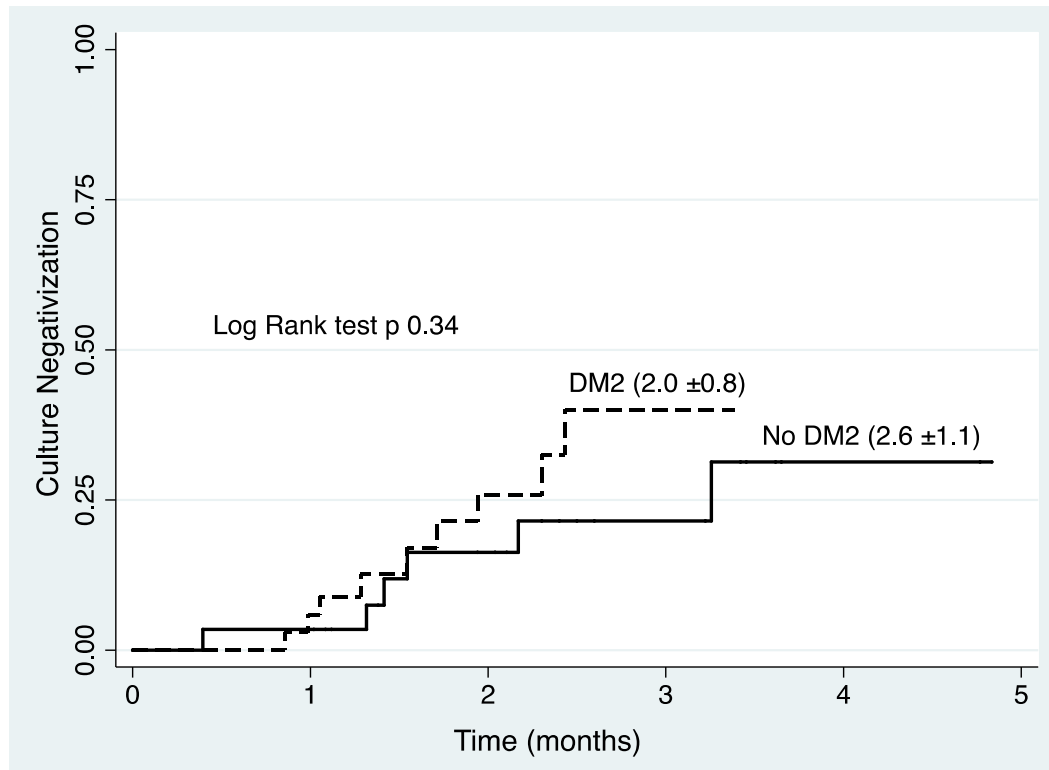
- Drug resistant PTB cohort started on January 2010 until now.
- All patients are diagnosed with culture and drug sensitivity tests and/or molecular tests.
- All treatments are established according to the Mexican and WHO guidelines.
- All patients have pretreatment laboratory analysis and an audiological evaluation.

General Characteristics of DR-PTB* patients

Characteristic	DM2 (n=38)	No DM2 (n=33)	p
Age, yrs	48.3 (±11.6)	36.2 (±15.0)	0.0003
Weight, Kg	58.0 (±13.6)	50.4 (±13.6)	0.01
BMI, Kg/m ²	22.6 (±3.9)	18.8 (±3.7)	0.0001
TB contact	16	15	NS
VIH Status	- 33 / ND 5	-29 / + 2 / ND 2	NS
Glucose (mg/dL)	212.7 (±109)	90 (±8)	---
HbA1C (%)	9.4% (±2.2)	----	---
Creatinine (mg/dL) [†]	0.8 (±0.3)	0.68 (±0.2)	NS
Albumin (gr/dL) [†]	3.1 (±0.7)	3.4 (±0.8)	NS
Hemoglobin (gr/dL) [†]	12.5 (2.7)	12.7 (2.1)	NS

* MDR, PreXDR and XDR patients included; [†] Results in 31 not DM2 and 36 DM2; ND: Not done

Microbiological Evolution



Variable	DM2	No DM2	p
Intensive phase	6.8 (± 1.4)	7.7 (± 1.5)	0.0 6
Treatment duration	24.4	24.0	0.5

Adverse Effects*

Adverse Event	DM2 (n=35)	No DM2 (n=31)	p	OR [95% Conf. Interval]
Psychiatric disorders	4	5	0.579	-----
Hypothyroidism [†]	10	2	0.02	5.8 (1.1 - 31.5)
Nephrotoxicity	17	6	0.013	3.93 (1.2 - 12.7)
Ototoxicity	10	7	0.5	-----
IV access infection	4	3	0.818	-----

*Data from MDR and Pre-XDR PTB patients.

[†]One patient had hypothyroidism before the treatment started.

Conclusions

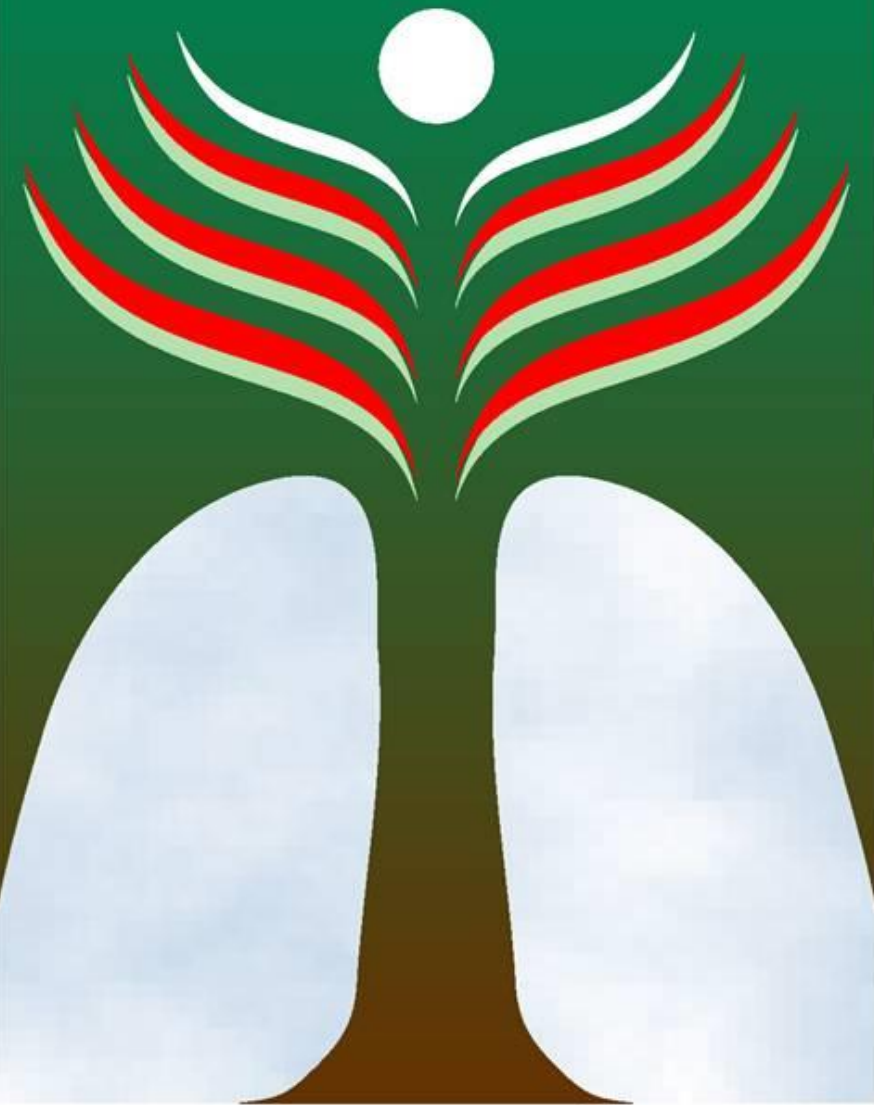
- The most frequent risk factor to develop active PTB in Mexico is DM2.
- DM2 appears to be associated with MDR PTB.
- DM2 seems to be a risk factor for adverse events during drug resistant PTB treatment.

Limitations

- Some patients have not completed the treatment at the moment of this review.
- We could not assess second line drugs sensitivity tests in all samples
- Not all patients fulfilled the audiological and laboratory monitoring established.



Instituto Nacional de
Enfermedades Respiratorias
Ismael Cosío Villegas



**México Libre de
Tuberculosis**®

CLINICA DE TUBERCULOSIS

- Dr. Miguel Angel Salazar
- Dra. Marcela Muñoz
- Dra. Dina Martinez
- Dr. Héctor Flores
- Dr. Alfredo Torres
- Dr. Héctor Villareal