MULTIDRUG RESISTANT TUBERCULOSIS IN TUNISIA

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Tunisia
INTRODUCTION

- Tuberculosis is an old disease
- Known since the antique
- Still a major health problem in many countries
EVOLUTION OF TUBERCULOSIS IN TUNISIA
For Tunisia, the two aims of the WHO are reached:

- Rate of detection **82%** (70%)
- Rate of recovery **90%** (>85%)
CURRENT SITUATION OF THE MDR-TB IN TUNISIA
The vast majority of patients are from the north of Tunisia.
DISTRIBUTION ACCORDING TO AGE AND SEX

- 0-14 years: 18%
- 15-24 years: 31%
- 25-34 years: 16%
- 35-44 years: 11%
- 45-54 years: 2%
- 55-64 years: 18%
- > 64 years: 4%

Man
Woman
## RISK FACTORS

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Number</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcoholism</td>
<td>25</td>
<td>57%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>7</td>
<td>16%</td>
</tr>
<tr>
<td>Prisoners</td>
<td>7</td>
<td>16%</td>
</tr>
<tr>
<td>Psychiatric disease</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>HIV</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>
EVOLUTION

- Under T: 37 (81%)
- Defaulted: 2 (5%)
- Cure: 3 (7%)
- Death: 2 (5%)
In our country, MDR-TB is evoked:

- Intimate contact with MDR-TB patient
- Failure of retraitement including Isoniazid et Rifampicin (II category)
- Failure of traitement >5 month with only first-line anti-tuberculosis drugs (I category)
Recommendation of DST (PNLT) if:

- Smear (+) at 1 month of treatment
- Retreatment
MANAGEMENT OF MDR-TB IN THE HOSPITAL

- Admission to an isolation unit in specialized centers
- Windows open, door closed
- Port of mask
- To avoid the displacement out of the rooms
PRINCIPALES OF TREATMENT

- The choice of optimal association of MDR-TB treatment depended on DST
- Not prescribed Isoniazid and rifampicin
- Should include at least 5 drugs (at least 3 never used)
- Directly observed treatment (DOTS)
## Suggested Treatment Regimens for Drug-Resistant TB in Tunisia

<table>
<thead>
<tr>
<th>Resistance to Isoniazid and Rifampicin (Streptomycin)</th>
<th>Initial phase</th>
<th>Duration</th>
<th>Continuation phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isoniazid and Rifampicin (Streptomycin)</td>
<td>Drugs</td>
<td>Duration</td>
<td>Drugs</td>
</tr>
<tr>
<td>1- Kanamycine</td>
<td>6</td>
<td>1- Ethionamide</td>
<td>18</td>
</tr>
<tr>
<td>2- Ethionamid</td>
<td>6</td>
<td>2- Ofloxacin (or ciprofloxacin)</td>
<td>18</td>
</tr>
<tr>
<td>3- Pyrazinamide</td>
<td>6</td>
<td>3- Ethambutol +/-</td>
<td>18</td>
</tr>
<tr>
<td>4- Ethambutol +/-</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5- Ofloxacin (or ciprofloxacin)</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MANAGEMENT IN HOSPITAL

- Treatment split during the day
- Daily and directly observed treatment
- Auxiliary treatment
- Management of side effects
- Nutritional and psychological support
- Declaration
- Education of patients
MONITORING IN HOSPITAL

- Physical exam: symptoms, temperature, weight

- Biology: - sputum smears and cultures
  - renal and hepatic bilan
  - TSH, audiogram, visuel tests
  - Pg test for child bearing age women

- CXR
SPUTUM SMEARS AND CULTURES
AFTER DISCHARGE FROM HOSPITAL

Coordination between:

- Hospital
- DAT
- CSB
Clinic visits in chest department: (every 2 months):

- Efficiency of treatment
- Clinical exam: weight, symptoms
- Adherence to treatment
- Sputum smears + cultures
- CXR: ≤ 6 months
- Side effects
IN THE CSB

- Daily and directly observed treatment
- Drug toxicity monitoring
- Detect non compliant patient’s
- Detect families cases (CXR, sputum smears, IDR)

/2 years
CONCLUSION

- Most MDR patients have had problems with non-adherence in the past.
- Adherence to MDR Tx is difficult because the prolonged period of treatment, larger amount of drugs, and more serious side effects.
- Adherence to Tx is very important to avoid XDR TB.
THANK YOU