

## TB follow up

- I. Side effect monitoring of anti-TB treatment
- II. Monitoring of the treatment response

### I. Side effect monitoring of anti-TB treatment

#### A. Common side effect

|          | Liver     | Skin           | Eye           | Renal          | Neuro-pathy        | Joints     |
|----------|-----------|----------------|---------------|----------------|--------------------|------------|
| <b>H</b> | Hepatitis | Itching & rash | Major S.E     | Minor S.E      | Burning sensation  |            |
| <b>R</b> | Hepatitis | Itching & rash |               | Renal Toxicity | Orange Color urine |            |
| <b>Z</b> | Hepatitis | Itching & rash |               |                |                    | Joint pain |
| <b>E</b> | Hepatitis | Itching & rash | Visual defect |                |                    |            |

#### B. Management of minor side effect of anti-TB treatment

| Drugs        | Side-effects               | Management                                                    |
|--------------|----------------------------|---------------------------------------------------------------|
| Isoniazid    | Burning sensation          | Pyridoxine (Vit B6 supplementation)                           |
| All drugs    | Anorexia, Nausea, Vomiting | Provide antiemetic, and/or provide the drugs with small meals |
| Pyrazinamide | Joint Pain                 | Reassurance and provide analgesic.                            |
| Rifampicin   | Orange/Red urine           | Reassurance                                                   |

Isoniazid may cause symptomatic pyridoxine deficiency particularly in severely malnourished children and HIV infected children on highly active ART. Vit B6 supplementation is needed for these clients.

| Treatment | Dosage of Isoniazid      | Vit B6 prophylaxis dose for peripheral neuropathy |
|-----------|--------------------------|---------------------------------------------------|
| Anti-TB   | 225-300mg (75mg per tab) | 10-25mg/ day                                      |
| LTBT (6H) | 300mg/ day               | 10-25mg/ day                                      |
| 3HP       | 900 mg/ wk               | 25-50mg/week                                      |

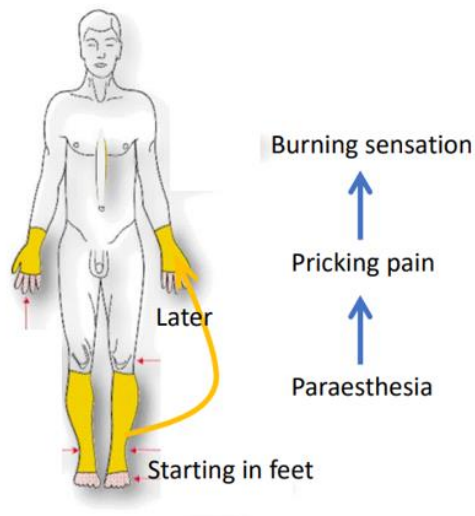


Fig 6; Pattern of Isoniazid induced peripheral neuropathy

### C. Management of major side effect of anti-TB treatment

#### i. Hypersensitivity management

| Severity           | Clinical presentation                                                                            | Management                                                                                                                                                              |
|--------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mild (Grade 1)     | <ul style="list-style-type: none"> <li>Itchiness without rash</li> <li>Localized rash</li> </ul> | <ul style="list-style-type: none"> <li>Reassurance</li> <li>Continue treatment with closely monitoring (It may subside in some patients and may also worsen)</li> </ul> |
| Moderate (Grade 2) | <ul style="list-style-type: none"> <li>Generalized rash with dry desquamation</li> </ul>         | <ul style="list-style-type: none"> <li>Symptomatic treatment (B'ton, fluid)</li> <li>Notify the danger signs to the patients</li> </ul>                                 |
| Severe (Grade 3)   | <ul style="list-style-type: none"> <li>Mucosal involvement</li> </ul>                            | <ul style="list-style-type: none"> <li>Stop all the drugs like anti TB, cotri and ART.</li> </ul>                                                                       |

|                            |                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            | <ul style="list-style-type: none"> <li>• Moist desquamation/ulcer</li> <li>• High fever (<math>&gt;38^{\circ}\text{C}</math>) with rash (May be no Fever because of taking paracetamol at home)</li> </ul> | <ul style="list-style-type: none"> <li>• To consider the need of tailing off in stopping ART.</li> <li>• Manage the case accordingly.</li> <li>• When all the symptoms subside and clam down, reintroduce anti-TB one by one with the order of H, R, Z, E (see the patients after 3 days of reintroducing each drug and then add another one)</li> </ul> |
| Life-threatening (Grade 4) | Steven-Johnson Syndrome                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>• Stop all the drugs,</li> <li>• Manage as necessary and</li> <li>• Refer to hospital</li> </ul>                                                                                                                                                                                                                  |

## ii. Hepatitis management

- Increased liver enzymes and/or hepatitis S/S (N, V, LOA, tender liver, jaundice, ascites, bleeding manifestation) → suspect liver injury
- Exclude other causes of the symptoms
- For initiation anti-TB treatment in the cirrhotic patient → Refer to the hospital
- For initiation anti-TB treatment in the patient with acute hepatitis
  - Liver enzymes  $< 3$  times of ULN → discuss with the supervisor to start anti-TB and monitor liver enzymes (1-2 weeks later)
  - Liver enzymes  $\geq 3$  times of ULN → consult with Nation TB
- Acute hepatitis in a patient receiving anti-TB treatment → monitor liver enzymes and hepatitis S/S.
  - Stop all drugs if liver enzymes (ALT/AST)  $\geq 3$  times UNL with hepatitis S/S or  $\geq 5$  times UNL without hepatitis S/S.
  - When liver enzymes subside → discuss with the supervisor to restart the treatment.

## II. Monitoring of the anti-TB treatment response

- Monitoring on improvement of
  - clinical signs and symptoms and

- the weight trend
- Follow up sputum testing

| Anti TB regime     |              | Follow up sputum testing |
|--------------------|--------------|--------------------------|
| Initial regime     | 2HRZE/ 4HR   | M2, M5, Mend             |
| Retreatment regime | 3HRZE/ 5HRE  | M3, M5, Mend             |
| Longer regime      | 2HRZE/ 10HR  | M2, M5, M6, Mend         |
| ○ New cases        | 3HRZE/ 9 HRE | M3, M5, M8, Mend         |
| ○ Retreated cases  |              |                          |

Base on the result of sputum AFB,

- Sputum (-) → no need for further investigation.
- Sputum (+) → do gene Xpert

| Interpretation and action for the follow up gene X pert results |                                         |                                             |                                                                                                                                                                |                                                                                                         |
|-----------------------------------------------------------------|-----------------------------------------|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                                                                 | Gene X-pert MTB result                  | Gene X-pert Rifam result                    | Next Step                                                                                                                                                      | Further next step                                                                                       |
| <b>T</b>                                                        | MTB detected: high, med, low, very low) | Rifam sensitive                             | Send Xpert XDR.<br>Discuss with PMC.                                                                                                                           |                                                                                                         |
| <b>N</b>                                                        | MTB not detected                        | No result                                   | Send for 1 <sup>st</sup> LPA.<br>Discuss with PMC.                                                                                                             |                                                                                                         |
| <b>TT</b>                                                       | MTB detected: Trace)                    | Rifam sensitive/ no result or indeterminate | M 2/3 – change to Continuation Phase.<br><br>M 5/end<br>send culture with a new sample.<br>Discuss with the supervisor for the outcome and the treatment plan. |                                                                                                         |
| <b>I</b>                                                        | MTB: indeterminate                      | No result                                   | Send for 2 <sup>nd</sup> Gene with a new sputum sample.                                                                                                        | I/TI - send for 1 <sup>st</sup> LPA (no new sputum sample is required).<br>Discuss with the supervisor. |
| <b>TI</b>                                                       | TI (MTB detected)                       | Rifam resistance indeterminate              |                                                                                                                                                                |                                                                                                         |
| <b>RR</b>                                                       | MTB – positive for any result           | <b>Rifam resistance</b>                     | Send for Xpert XDR                                                                                                                                             | Refer to NTP for MDR TB treatment.                                                                      |