

Side effect monitoring of anti-TB treatment

A. Common side effect

	Liver	Skin	Eye	Renal	Neuro-pathy	Joints
H	Hepatitis	Itching & rash	Major S.E	Minor S.E	Burning sensation	
R	Hepatitis	Itching & rash		Renal Toxicity	Orange Color urine	
Z	Hepatitis	Itching & rash				Joint pain
E	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 need 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

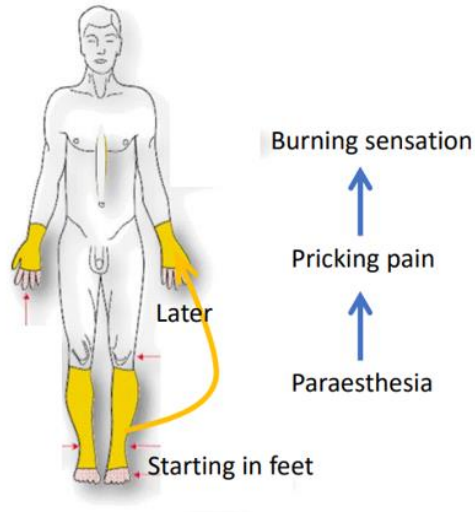


Fig 6; Pattern of Isoniazid induced peripheral neuropathy

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

i. Hypersensitivity management

Severity	Clinical presentation	Management
Mild (Grade 1)	- Itchiness without rash - Localized rash	- Reassurance - Continue treatment with closely monitoring (It may subside in some patients and may also worsen)
Moderate (Grade 2)	Generalized rash with dry desquamation	- Symptomatic treatment (B'ton, fluid) - Notify the danger signs to the patients
Severe (Grade 3)	- Mucosal involvement - Moist desquamation/ulcer - High fever ($>38^{\circ}\text{C}$) with rash (May be no Fever because of taking	- Stop all the drugs like anti TB, cotri and ART. - To consider the need of tailing off in stopping ART. - Manage the case accordingly. - When all the symptoms subside and clam down, reintroduce anti-TB

	paracetamol at home)	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)
Life-threatening (Grade 4)	Steven-Johnson Syndrome	• Stop all the drugs, • Manage as necessary and • Refer to hospital

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 ≥ 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) ≥ 3times UNL with hepatitis S/S or ≥ 5 times UNL without hepatitis S/S.
 - When liver enzymes subside → discuss with the supervisor to restart the treatment.