

# M E D   E R R O R   B U L L E T I N

Strives to promulgate preventable medication errors amongst healthcare professionals

Brought to you by Pharmacy Department, HCTM

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## Medication Omission (Transcribing)

70 year old, 45kg, Male  
Smear **positive PTB + Covid** pneumonia Cat 2B,  
on **Tab Akurit-4\***, 3 tabs OD for 5/7 **without** pyridoxine supplementation

\*Akurit-4 has **Isoniazid**, Rifampicin, Ethambutol & Pyrazinamide

### The Case

## Wrong Formulation (Transcribing)

- 67 year old, Female
- has **Hyperaldosteronism** and underlying **NCNC anaemia**
- on ryles tube was given Tab **Potassium Chloride SR** 1.2g BD,  
Potassium level: 3.3 mmol/l

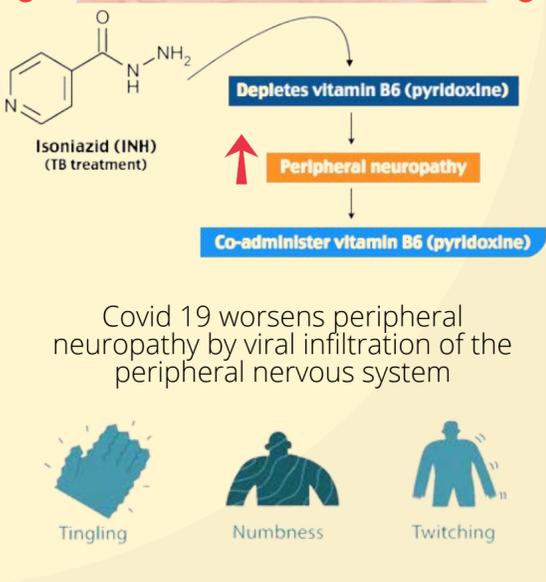
### The Case

## Wrong Dose (Administration)

- 76 year old, 50kg, Female
- **Closed fracture** of right Intertrochanteric fracture
- Required **IV Morphine** to relieve **moderate- severe pain**
- Healthcare officer intended IV Morphine **2 mg QID** however was **wrongly administered as 10mg QID**

### The Case

## Potentials Events



## What happened then?

Crushing destroys the **sustained-released (SR)** properties of the tablets

↓

Causing erratic blood levels and increase risk of ulceration

↓

Patient's Hb was 8.6 and Plt 167-162

↓

1 pint of packed cell transfusion

↓

Hb increased to 11.8

Note: Hb in g/dL, Platelet in 10<sup>9</sup>/L

## Consequences

BP: 116/79, PR:94, RR:20, SPO2:98%

↓

BP: 98/56, PR:91, RR:18, SPO2 95-96%

Patient appeared very drowsy induced by morphine's respiratory depressant effect

## HOW TO AVOID

- ✓ Recheck PPUKM Formulary App or your pharmacist
- ✓ **Pyridoxine (B6) 10-20mg OD** supplementation should be given with **isoniazid** (contained in Akurit-4) to prevent peripheral neuropathy & helps to compensate loss of biologically active pyridoxine & balances nerve metabolism

## HOW TO AVOID

Potassium Chloride (KCl) mixture can be given and is **compatible** with Ryles tube

However, potassium chloride mixture has **high osmolality**

Dilute each 15 ml of Potassium chloride **10%** (1g/10ml) mixture with at least **90ml water** to avoid risk of stomach cramp, nausea & diarrhea

Note: Different % of Potassium chloride mixture needs different dilution  
Eg: Potassium chloride 20% solution diluted into 180ml water



## HOW TO AVOID

- Opioids in **elderly** should be started at **25-50%** of the recommended adult dose
- **Start low and go slow** approach is essential as Morphine undergoes substantial hepatic metabolism
- Elderly have **reduced hepatic blood flow, reduced liver mass & functioning liver cells**
- Patients who report **severe pain** will require **ongoing titration** and **frequent re-evaluation** to balance pain relief with adverse effects
- Apart from BP,PR,RR,SPO2, Monitor **ABG** for potential **Respiratory Acidosis**
- Countercheck **dosage** and **dilution** of IV Morphine



**IV morphine 10mg/ml, if 2mg IV bolus morphine indented**  
**There's 2 options of administration (undiluted or diluted)**

Give 2mg (0.2ml) **undiluted** over **4-5mins**

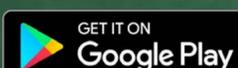
OR

IV Morphine 10mg **diluted** into 20ml NS/D5% Syringe 4ml (2mg) Administer over **4-5 mins**

Note: Rapid intravenous administration (<4-5mins) may result in chest wall rigidity affecting breathing

1. Pyridoxine and the Isoniazid-Induced Neuropathy MANDEL, WILLIAM; Diseases of the Chest, Volume 36, Issue 3, 293 - 296.  
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 3. Diamond KB, Weisberg MD, Ng MK, Erez O, Edelstein D. COVID-19 Peripheral Neuropathy: A Report of Three Cases. Cureus. 2021 Sep 20;13(9):e18132. doi: 10.7759/cureus.18132. PMID: 34692341; PMCID: PMC8525663.  
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