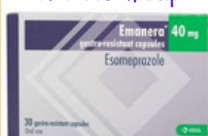


Wrong drug (Prescribing Error)

- The Error** Tab. Pantoprazole was prescribed for a patient on Ryles Tube (nasogastric tube)
- Reasoning** The bioavailability of Tab. Pantoprazole is reduced to 75% of oral equivalent when given via NG tube & most pantoprazole products do not recommend dispersion probably owing to their large bead sizes.
- How can we avoid?** If a patient is using a Ryles Tube and a PPI is indicated, instead of Tab. Pantoprazole, please consider the following table of Proton Pump Inhibitors available in HCTM formulary instead;

PPI, Brand name & Cost estimate	Description	Ryles tube-friendly?	Recommendation
1) ESOMEPRAZOLE CAPSULES			
EMANERA 40mg RM 0.59/cap 	- The current Esomeprazole brand available in the formulary. - Pellets inside capsules are larger than other brands, causing clogging problems. - Manufacturer suggests to use feeding tubes of French size (Fr) ≥ 16. Common sizes used are 12 Fr & 14 Fr	 need Fr size ≥ 16 (rarely used)	Mix pellets inside capsule with non-carbonated water . Avoid other liquids to prevent dissolution of enteric coating. Shake vigorously & administer quickly to avoid clogging of tube. 
ESOZ 40mg RM 0.9/cap, NEXIUM 40mg RM 2.07/cap	- Can disperse well in water. - Esomeprazole has high bioavailability even via feeding tubes.  		Recommended choice when these brands are available 
2) OMEPRAZOLE CAPSULES/DISPERSIBLE TABLETS			
OMILOCK 20mg RM 0.27/cap 	- Capsule contents can be mixed in acidic fruit juices (apple/orang juice) or non-carbonated water. Investigation suggests that acidic liquid could preserve the enteric-coating of granules, improving drug delivery and absorption. - Known to block tubes of less than 8Fr. Common sizes used are 12 & 14 Fr.	 need Fr size ≥ 8 Fr	Take immediately or within 30 minutes. Use feeding tubes ≥ 8 Fr.
LOSEC MUPS 10mg dispersible tablets RM 4.77/tab	- Usual adult dosing is 2 - 4 tablets (20-40mg) OD. - Tablets disintegrates to give a dispersion of small granules & have a tendency to block feeding tubes < 8 Fr. 	 need Fr size ≥ 8 Fr	Reserved for Ryles Tube patients when no other options are feasible as it's most expensive.

NOTE! DO NOT CRUSH PPIs.

Tablets or capsules usually present themselves as pellets/granules upon dispersion. Crushing the pellets may compromise the protective coating and result in is loss of efficacy. *** Brands available may vary with time.

Duplicate Errors in one prescription

Reasoning

- same drug class, potentiate side effects
- SGLT2 inhibitors. → higher risk of **hypoglycaemia**
- Statins → higher risk of **muscle damage & liver problems**



HCTM Formulary App is on...



PDF version of this bulletin can be found at <https://hctm.ukm.my/farmasi/>

Leanne Lew Hwui Ser

Nur Hafiza Saripin
Michelle Tan Hwee Pheng

The Errors

Tab. DapaGLIFLOZIN and EmpaGLIFLOZIN as well as Tab. SimvaSTATIN 40mg ON and Tab. AtorvaSTATIN 40mg ON were indented concurrently in the same prescription for 5 months.



How can we avoid duplicate errors?

CHECK for DRUG DUPLICATES when copying & pasting previous medication prescriptions

This ME Bulletin is an intellectual property of PPUKM Pharmacy Department.

References:

1. Rebecca White & Vicky Bradnam, Handbook of Drug Adm. via Enteral Feeding Tubes 2nd ed. Pharmaceutical Press, 2011.
2. Ferron GM, Ku S, Abell M, et al. Oral bioavailability of pantoprazole suspended in sodium bicarbonate solution. Am J Health Syst Pharm 2003; 60(13): 1324-1329.
3. Handbook of Extemporaneous Preparation, Pharmaceutical Press, 2010.
4. https://www.nhs.uk/grampian.org/globalassets/foi/foi-public-documents/1---all-documents/guide_enteraltubea.pdf.