

PHARMACY UPDATE

A MONTHLY BULLETIN



Pharmacy Update — the first 10 years



1995-1998

The Update has since had 4 facelifts in the past, and has changed from a fortnightly to a monthly bulletin.

We have also started a monthly competition with attractive prizes to be won! Answers to this quiz is found by reading the bulletin.

Happy Reading!

The Editor [PL]



1998-2000

As we enter into 2006, the Pharmacy Update goes into its eleventh year of publication. It was first started in 1995 as a fortnightly two-page bulletin by the Drug Information Pharmacist.

Since it is now into its 11th year of publication, the Update is now due for a major, radical new look! We plan to deliver to you a 4 page bulletin that has lots more graphics and captions, which covers a wider range of topics. Each bulletin will focus on a particular system (eg gastrointestinal for January issue) or disease state, and will have a section on new drugs.

An editorial team has also been formed, so that the Update is now a team effort, rather than just the effort of the Drug Information pharmacist.



2000-2001



2001-2005

The Editorial team

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We welcome your feedback and your comments! Please write or contact us at:

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Gong Xi Fa Cai & Selamat Tahun Baru Hijrah 1427

In anticipation of the Chinese New Year holidays, Awal Muharam and Federal Territory holidays, Outpatient pharmacy has started supplying 2 months medication to patients. This is done to ease the crowd and to cope with the lack of staff before and after the holidays. However, at the moment, providing 2 months supply is con-

finied to festive seasons only. It is, therefore, very much appreciated that patients cooperate and comply with the appointment dates given.

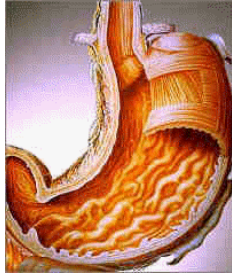


Last but not least, the Editorial team would like to wish all our Chinese readers a very joyous and prosperous new year, and to our Muslim readers—Selamat Tahun baru Hijrah 1427. [AL/PL]

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Use of IV Proton Pump Inhibitors — Pantoprazole & Omeprazole



Intravenous PPIs can only be prescribed by Medical and Surgical Gastro-enterologists

Use of intravenous omeprazole & pantoprazole is restricted to the following acute conditions where total acid suppression is needed:

- Grade III or IV esophagitis with bleeding
- Acute, severe upper GI bleed (UGIB) in patients who are hemodynamically unstable:
 - * SBP < 100 mmHg
 - * Drop in postural BP of ≥ 20 mmHg
 - * Drop in Hb ≥ 20 g/L +/- blood transfusion required
 - * History of syncope or pre-syncope
 - * Rise in pulse rate > 20 bpm
- Minor GI bleed (melaena +/- coffee ground emesis, or endoscopically confirmed, not high risk for rebleed, and haemodynamically stable) in a patient unable to take medications orally
- Upper GI bleed controlled with surgery or sclerotherapy

Dosage

IV bolus Omeprazole or Pantoprazole 80mg followed by a continuous infusion of 8mg/hour

OR

IV bolus Omeprazole or Pantoprazole) 40mg Q12H for less severe cases

- Therapy should be reassessed every 48 hours, and if conditions improve, patients should be switched to oral PPIs if able to tolerate orally

(JL/GKL/CZS/PL)

References:

1. Drug Formulary, Kingston General Hospital, Canada
2. Australian Injectable Drug Handbook,
3. Product information leaflets — Injection Losec® & Controloc®

Preparation & Administration

Pantoprazole 40mg Injection

- * Available as 40mg powder for injection
- * Reconstituted with 10mL Sodium Chloride 0.9% (4mg/mL concentration)
- * Solution can be given as IV bolus over 2 -15 minutes or further diluted with Sodium Chloride 0.9% or Dextrose 5%
- * Reconstituted solution must be used within 12 hours of preparation

Omeprazole 40mg Injection

- * Available as 40mg powder for injection
- * Reconstituted with 10mL of supplied solvent (4mg/mL concentration)
- * Solution can be given as IV bolus or further diluted with Sodium Chloride 0.9%
- * Reconstituted solution must be used within 4 hours after preparation, while omeprazole in sodium chloride may be used for up to 12H after dilution.

(JL/HKD/PL)

Inadvertent paracetamol overdose

Paracetamol is a remarkably useful simple analgesic with a good safety profile. Although intentional overdose, if left untreated, is a well known cause of hepatotoxicity, overdose associated with therapeutic use is an appreciated cause of serious injury. In a recently published Australian series, 9 of 29 cases of paracetamol-induced fulminant liver failure occurred with accidental overdose during the regular intake of paracetamol over a period of several days for the treatment of pain or febrile illness.¹ Two additional articles have described a total of 10 Australian cases of paracetamol hepatotoxicity with therapeutic use in children given doses as low as 20mg/kg/day.^{2,3}

The recommended dose for paracetamol for adults is 1g 4 hourly up to a maximum of 4g/day, and for children and adolescents it is 15mg/kg 4 hourly up to a maximum of 60mg/kg/day (for 7-12 years maximum 2g/day). Exceeding the recom-

mended dose because of inadequate pain control, and failure to recognize the paracetamol content of other preparations used concurrently are potential causes of inadvertent overdose. There is a wide variety of products both OTC and by prescription that contain paracetamol.

Although the data are still inconclusive, poor nutrition, chronic alcohol abuse and chronic liver disease may all predispose to paracetamol toxicity because of depletion of glutathione stores. Short term poor oral intake, such as may occur during a febrile illness or following surgery, may also increase the risk.

Severe hepatotoxicity related to overdose in the therapeutic setting may be associated with a poorer prognosis than intentional overdose, possibly because of delayed recognition and treatment. Patients typically present with marked elevations of serum transaminase concentrations, and the history of

paracetamol ingestion may only be obtained on careful questioning. Presentation may be more than 24 hours since the last dose and plasma paracetamol may be low or undetectable by that time.

Health professionals are asked to reinforce the messages to avoid concurrent use of different paracetamol preparations, not to exceed the maximum daily dose, and not to use for more than a few days.

References

1. Gow PH, Jones RM et al. Etiology and outcome of fulminant hepatic failure managed at an Australian liver transplant unit. *J Gastroenterol & Hepatol* 2004;19:154-9
2. Miles FK, Kamanth R et al. Accidental paracetamol overdosing and fulminant hepatic failure in children. *Med J Aus* 1999;171:472-5
3. Hynson JL, South M. Childhood hepatotoxicity with paracetamol doses less than 150mg/kg per day. *Med J Aust* 1999;171:497

[ADRAC 2005, 24(5)] [PL]



**“. recommended paracetamol doses are:
Adults: 1g q4h,
Max: 4g/day,
Children & adolescents:
15mg/kg q4h,
Max: 60mg/kg/day (for 7-12 years max: 2g/day)”**

Crossword competition 12.1

Attractive prizes to be won! Entries to be sent to: Competition 12.1, The Editor, PTJ Pharmacy, UMMC before 10th February 2006. Winners will be published in the next issue of the Pharmacy Update.

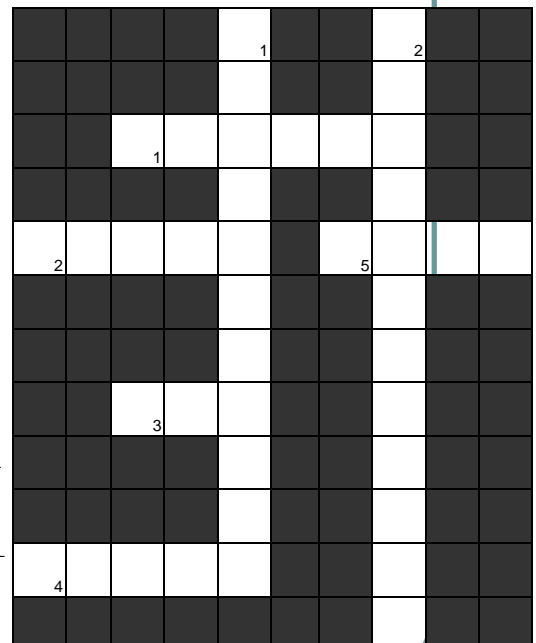
Across:

1. The pharmacy update is now _____ years old.

2. The maximum adult dosage of paracetamol is _____ tablets a day.
3. An acronym for proton pump inhibitors is _____.
4. Paracetamol poisoning can cause _____ toxicity.
5. The pharmacy update has had _____ facelifts in the past.

Down:

1. _____ is used to treat avian flu.
 2. _____ is available to treat esophagitis with bleeding.
- Name: _____
Position: _____
Unit: _____
Tel: _____



Changes in the formulary



The following changes in the formulary were decided by the Drugs & Therapeutics Committee:

Drug	Decision	Classification	Can be prescribed by consultants & lecturers from
Atomoxetine tab 10mg, 18mg, 25mg, 40mg and 60mg (Strattera®)	Use as an alternative treatment for ADHD.	Special Formulary	Psychiatry
Levocetirizine tab 5mg (Xyzal®)	Will not be added in the formulary as other alternatives are currently available (Cetirizine, Loratidine, Desloratidine)		
Moxifloxacin tab 400mg (Avelox®)	Will not be added in. Ciprofloxacin is available to treat any acute bacteria sinusitis resistant to Co-Amoxiclav.		
Brimonidine Eye Drops 0.15% (Alphagan®)	Use to treat glaucoma resistant to Timolol. Limited to 150 pts/month.	Standard Formulary	Ophthalmology
Conjugated Pneumococcal Vaccine (Prevenar®)	Use to vaccinate paediatrics aged 6 months up to 3 years.	Special Formulary	Paediatrics

To improve is to change; to be perfect is to change often. ~ Winston Churchill

WE'RE ON THE WEB! VISIT US AT WWW.UMMC.EDU.MY AND CLICK ON PHARMACY UPDATE

Oseltamivir (Tamiflu®)

Oseltamivir Phosphate (Tamiflu) is FDA approved for prophylaxis and treatment of influenza. However, since the beginning of the Avian flu epidemic, Oseltamivir has been recommended by WHO in the prophylaxis and treatment of suspected avian influenza A (H5N1).

There are currently no controlled clinical trials for this use. However, experience has shown that patients who receive this drug early on had a statistically significant higher chance of survival.

Oseltamivir Phosphate (Tamiflu)

In vitro and mice data demonstrated that oseltamivir inhibits virus replication, inhibits neuraminidase (NA) activity, and prevents death in mice

infected with avian influenza A viruses¹⁻².

Dosage: Once the patient has been suspected of contracting avian flu H5N1, Oseltamivir should be started as soon as possible at 75mgbd for 5 days^{3,4} Doses may be doubled for severe cases.

Prophylactic doses for all that have been previously exposed is 75mg daily for 7 to 10 days.

Dose adjustments: Paediatric dosages should be adjusted by weight.

Oseltamivir is excreted mainly by the kidney. Therefore, dosage reduction may be needed in patients who are renally impaired. No dosage adjustment is needed in hepatic impairment⁵

Resistance: Even though Avian flu has not shown any resistance to oseltamivir in mice studies¹⁻², recent reports suggest that this may occur. Prudent use is therefore necessary

References:

1. Govorkova et al: Antimicrob Agents Chemother 2001; 45 (10):2723-2732
2. Leneva et al: Antiviral Res 2000; 48:101-115
3. Beigel et al: N Engl J Med 2005; 353(13):1374-1385
4. WHO http://www.who.int/csr/disease/avian_influenza/en/. As accessed October 3 2005
5. Tamiflu product insert

[LN/PL/JL]