

# encapsulate

## Welcome to 'encapsulate'

Welcome to the seventeenth edition of **encapsulate**. In this issue we draw attention to the importance of ensuring safe practices when administering epidural medications; the need to counsel parents on administering children's medications; and we introduce eletripan, a new treatment for migraines which can be accessed as a streamlined authority item under the PBS.

You can obtain further copies of **encapsulate** via our website - [www.slade.net.au](http://www.slade.net.au). Please forward any comments or suggested topics for our next issue to [marketing@slade.net.au](mailto:marketing@slade.net.au).

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## Safe Administration of Epidural Analgesia and Anaesthesia

A recent medication incident in New South Wales has reinforced the need for safe practices when administering medications into the epidural space. In the recent case, an obstetric patient receiving an epidural during labour was inadvertently administered the topical antiseptic solution chlorhexidine instead of the anaesthetic agent.

Attention should be drawn to the safety practices recommended in the document titled 'Medication safety practices in epidural anaesthesia or analgesia' produced by NSW Health<sup>1</sup>:

1. Prepare the patient's skin using a skin preparation solution. This step must precede preparation of any medication for injection.
2. Remove the antiseptic solution container and associated swabs from the sterile set-up.
3. Prepare medication for epidural injection using aseptic technique. The prescriber must select each medication, prepare the medication for administration, administer the medication and subsequently record its administration.

Where a nurse or midwife is required to prepare a medicine dose for administration by

a prescriber in a sterile set-up, the prescriber must act as the second person and check the medicine before he/she administers it to the patient.

4. Insert the epidural catheter.
5. Inject the epidural medicine.
6. Record the administration.

In a position statement dated August 2010, The Australian and New Zealand College of Anaesthetists supports the NSW Health recommendations:

*"Drugs used for epidural anaesthesia or analgesia must be handled in a manner that avoids inadvertent administration of the wrong drug (including skin preparation solutions). During the initiation of epidural anaesthesia or analgesia, the same person must select each medication, prepare the medication administration, administer the medication and record its administration.*

*Receptacles containing skin preparation solution should be removed from the sterile setup following application of the solution to the skin. Intermediate steps in drug handling, such as decanting, local anaesthetic solutions into unlabelled containers on sterile setup, should be avoided."*

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## Parents Should be Counselling how to Administer Medications to their Children

Research published earlier this year<sup>ii</sup> showing that medication doses administered by parents are frequently inaccurate has highlighted the need to counsel parents on techniques of administration. The study, conducted in the US, enrolled 302 parents and assessed their ability to accurately measure 5mL of liquid utilising six commonly used devices for medication administration. The devices consisted of a dosing

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cup with printed measurements, a dosing cup with etched measurements, a dosing spoon, a medicine dropper, and two types of oral syringes. The study found that the devices parents measured most accurately with were the medicine dropper (94% of parents measured accurately), oral syringes (91% of parents measured accurately), and measuring spoon (86% of parents measured accurately). Importantly, the study found that errors were made in up to 50% of measurements made by parents.

This study identifies the need to consider parents' health literacy when preparing paediatric patients for discharge, and also to provide detailed counselling on how to measure volumes of liquids with the device supplied. A good practice when preparing discharges for paediatric patients is to observe parents measurements of volumes using the device, thereby allowing for the correction of any errors prior to the parents being made responsible for the administration of medicines at home.

For advice and assistance with counselling parents on the use of measurement devices, please contact your pharmacy department.

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### Eletriptan

Eletriptan (Relpax®) is a new medication used for the acute treatment of migraine that belongs to the triptan family of medicines. Eletriptan is active at vascular 5-HT<sub>1B</sub> and neuronal 5-HT<sub>1D</sub> receptors, and works to reduce the effects of migraine by constricting cranial blood vessels and by affecting pain transmission.<sup>iii, iv, v</sup>

In clinical trials, most patients treated with eletriptan received relief from their migraine within 2 hours of administration of a 40mg dose. The headache returned within 24 hours in 23% of patients.

Eletriptan is well absorbed after oral administration, and is eliminated mostly by

metabolism, primarily by the CYP3A4 enzyme in the liver. It is contraindicated in patients with severe hepatic impairment, uncontrolled hypertension, confirmed coronary heart disease, subjective symptoms of ischaemic heart disease or Prinzmetal's angina, peripheral vascular disease, a history of CVA or TIA, or who have ergotamine or a derivative of it administered to them within 24 hours before or after eletriptan, received another 5-HT<sub>1</sub> receptor agonist, or have received within 48 hours a potent inhibitor of the CYP3A4 enzyme. Caution should be exercised in patients who are pregnant or lactating, patients under 17 years of age or older than 65, those with hepatic or renal impairment, and those receiving other serotonergic agents.

In adult patients 18-65 years of age, the recommended initial dose of eletriptan is 40mg. The maximum single dose is 80mg. Although repeated ineffective doses of eletriptan have been shown not to be beneficial, if the headache returns after initial improvement, a second dose may be administered. The maximum daily dose of eletriptan should not exceed 160mg.

Eletriptan is available as 40mg and 80mg tablets. It can be accessed as a streamlined authority item under the Pharmaceutical Benefits Scheme.<sup>vi</sup>

For further information, please refer to approved product information for Relpax®.

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*i* NSW Health. Correct identification of medication and solutions for epidural anaesthesia and analgesia. Safety Notice 010/10.

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*ii* Yin HS, Mendelsohn AL, Wolf MS et al. Parents medication administration errors: role of dosing instruments and health literacy. Arch Pediatr Adolesc Med. 2010; 164: 181-186.

*iii* Approved Product Information. <http://www.mimsonline.com.au> [Accessed 13/12/10]

*iv* Australian prescriber: Newly Marketed Drugs <http://www.australianprescriber.com/magazine/33/6/193/8> [Accessed 13/12/10]

*v* Australian Medicines Handbook. 2010.

*vi* <http://www.pbsonline.gov.au> [Accessed 13/12/10]