

RGH Pharmacy E-Bulletin

Volume 42 (11): July 4, 2011

A joint initiative of the Patient Services Section and the Drug and Therapeutics Information Service of the Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia. The RGH Pharmacy E-Bulletin is distributed in electronic format on a weekly basis, and aims to present concise, factual information on issues of current interest in therapeutics, drug safety and cost-effective use of medications.

Editor: Assoc. Prof. Chris Alderman, University of South Australia – Director of Pharmacy, RGH

© Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia 5041

Management of intractable hiccups

A hiccup (also called hiccough or singultus) is an involuntary, intermittent, spasmodic contraction of the diaphragm and intercostal muscles followed by laryngeal closure, and is usually transient. Rarely they can be persistent (continuing for 48 hours or up to one month) or intractable (longer than one month).

Comorbid conditions such as vascular disease, CNS disease, duodenal disease and postoperative recovery have been associated with intractable hiccups. Adverse outcomes associated with the condition include malnutrition, weight loss, fatigue, dehydration, insomnia, mental stress and decreased quality of life.

The mechanism of hiccups is not fully understood, with several neural pathways involved in the reflex arc and central connections not well demarcated. Neurotransmitters thought to be involved include GABA and dopamine. Many causes of persistent and intractable hiccups exist including infection, trauma, tumour, and gastrointestinal, metabolic and psychogenic disorders. The more common causes are ischaemic/haemorrhagic stroke, encephalitis, head trauma, goitre, pharyngitis, enlarged lymph nodes secondary to infection or neoplasm, and alcohol. Medications that have been associated with causing hiccups include dexamethasone, diazepam, opioids, dopamine agonists used in Parkinson's disease and antineoplastic agents.

Treatment recommendations have not been compared in controlled studies. Causative illness should guide treatment (e.g. acid suppression in gastro-oesophageal reflux disease). Even so, commonly no specific cause can be found. The efficacy of physical manoeuvres is unknown but these are recommended initially. These approaches have included breath holding and breathing into a paper bag (elevation of PaCO₂ may be inhibitory), Valsalva manoeuvre, sipping cold water, gargling, eyeball pressure, knees to chest and leaning forward.

Failure of physical measures may mean the pharmacological therapy is necessary. Data is lacking comparing treatments, with most recommendations at best based on small case series. Successful treatments can be stopped the day following cessation of hiccups and medications are usually trialled for seven to ten days before seeking alternative treatment. In some cases, treatments have been required for several months. Patient response and reassessment, including adverse effects of medication, should guide dose and duration. Recommended medications include:

- Metoclopramide (dopamine antagonist, prokinetic activity for gastroparesis)
- Chlorpromazine (phenothiazine antipsychotic used at the lower limits of the dose range)
- Baclofen (muscle relaxant)

In the palliative care setting clonazepam and haloperidol have also been recommended. Case reports have suggested benefits from gabapentin, carbamazepine and amitriptyline.

Acknowledgment – This E-Bulletin is based on work by Dr Brian Simmons, DATIS, RGH.

FOR FURTHER INFORMATION – CONTACT THE PHARMACY DEPARTMENT ON 82751763 or email: chris.alderman@rgh.sa.gov.au
Information in this E-Bulletin is derived from critical analysis of available evidence – individual clinical circumstances should be considered when making treatment decisions. You are welcome to forward this E-bulletin by email to others you might feel would be interested, or to print the E-Bulletin for wider distribution. Reproduction of this material is permissible for purposes of individual study or research.

View RGH E-Bulletins at www.auspharmlist.net.au/ebulletin.php