FAST FACTS AND CONCEPTS #81
MANAGEMENT OF HICCUPS

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Background  Hiccups (singultus) are distressing to patients and families; when chronic, they diminish quality of life. A hiccup is an involuntary reflex involving the respiratory muscles of the chest and diaphragm, mediated by the phrenic and vagus nerves and a central (brainstem) reflex center. A single episode can last for a few seconds to as long as several days. If they last longer than 48 hours hiccups are termed persistent; longer than one month, intractable. Etiologies range from stress/excitement to cancer, myocardial infarction, esophageal or gastric distension, liver disease, uremia, IV steroids, CNS lesions, chemotherapy, and idiopathic. Irritation of the vagus nerve or diaphragm is a common pathophysiologic mechanism.

Management  Once hiccups have lasted beyond a time-limited annoyance, deciding on therapeutic intervention should be based on a thorough clinical assessment and, if possible, treatment directed at the underlying cause. A thorough history, review of medications, focused review of systems, and physical exam may help guide initial choice of treatment. Many drug and non-drug treatments have been used, but there is little evidence of any one superior approach to management; virtually all current data are anecdotal. The patient’s prognosis, current level of function, and potential adverse effects from any proposed treatment should be considered.

Pharmacologic Therapy
• Anti-Psychotics: Chlorpromazine – the only FDA approved drug for hiccups. Dose: 25-50 mg PO TID or QID. Can also be given by slow IV infusion (25-50 mg in 500-1000 ml of NS over several hours). Haloperidol – a useful alternative to chlorpromazine; give a 2-5 mg (SubQ/PO) loading dose followed by 1-4 mg PO TID.
• Anti-Convulsants: Gabapentin – at doses of 300-400 TID has been described as effective in multiple case reports. Its dual role as an analgesic may make it an especially attractive therapeutic agent. Phenytoin – reportedly effective in patients with a CNS etiology of their hiccups. Dose: 200 mg slow IV push followed by 300 mg PO daily. Others: Valproic Acid and Carbamazepine have been reported to work for selected patients.
• Miscellaneous: Baclofen – the only drug studied in a double blind randomized controlled study for treatment of hiccups. 5 mg PO q8 hours did not eliminate hiccups but did provide symptomatic relief in some patients. Metoclopramide – 10 mg PO QID is an option, especially if stomach distension is the etiology. Nifedipine – 10 mg BID with gradual increase up to 20 mg TID has been suggested as a relatively safe alternative if other interventions have failed. Other drugs that have been tried with very limited success include: amitriptyline, sertraline, inhaled lidocaine, ketamine, edrophonium, methylphenidate, and amantidine.

Non-Pharmacologic Therapy  There are many well known, time-honored home remedies: gargling with water, biting a lemon, swallowing sugar, or producing a fright response. Other approaches are directed at a) vagal stimulation such as carotid massage orValsalva maneuver; b) interruption of phrenic nerve transmission via rubbing over the 5th cervical vertebrae; or c) interrupting the respiratory cycle through sneezing, coughing, breath holding, hyperventilation, or breathing into a paper bag. Other interventions such as acupuncture, diaphragmatic pacing electrodes, or surgical ablation of the reflex arc can be considered when other treatments fail.

References


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