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Hiccup Treatment during General Anaesthesia

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Editorial

The gastrointestinal function of the sedated patient may experience a variety of modifications, according to anesthesiologists. These modifications could have negative patient outcomes such aspiration pneumonia, difficulty intubating patients, poor operating room environment, and other issues. This chapter explains the aetiology of hiccups, regurgitation, and aspiration when under general anaesthesia and how to treat them. A hiccup is characterised by an episodic spasm of the diaphragm followed by the closure of the vocal cords, which is brought on by the activation of a reflex involving the brainstem, the spinal cord, and vagal afferents [1]. In order to manage hiccups when under anaesthesia, pharmacological medications and techniques to suppress vagal impulses are used. Hiccups can be brought on by a variety of surgical and anaesthetic conditions.

Regurgitation occurs when the upper gastrointestinal system develops a favourable pressure gradient and typical physiological defensive reflexes are inhibited, allowing gastric contents to flow backward. Increased gastric capacity, a decrease in lower esophageal sphincter tone, and a lack of protective airway reflexes are risk factors for regurgitation and aspiration. Risk reduction strategies include nil per os (NPO) recommendations, awake gastric emptying, and suitable pharmacologic prophylaxis. Treatment for aspiration while under anaesthesia that has been observed or is suspected should include lateral head positioning, oral suctioning, and endotracheal intubation. Corticosteroids, preventive antibiotics, and tracheal lavage are not frequently recommended [2]. Chemical pneumonitis, atelectasis, and aspiration pneumonia are the possible differential diagnoses for hypoxemia and respiratory distress following aspiration. These can be identified based on radiological findings and clinical course.

A hiccup is characterised by an abrupt closure of the glottis after an involuntary, sustained contraction of the diaphragm and respiratory muscles. Hiccups can be classified as transitory (lasting less than 48 hours), persistent (lasting between 48 hours and one month), or intractable (lasting longer than one month). Hiccups are a reasonably common symptom in patients with progressing cancer, with a reported prevalence of 3.9 percent to 4.5 percent, despite the low prevalence in general hospitalised patients (54 per 100,000, 0.054 percent). The symptoms of temporary hiccups might be relieved with therapies like drinking water or holding one's breath. Hiccups, however, can result in sleep difficulties, weariness, fatigue, melancholy, malnutrition, weight loss, and dehydration if they are persistent or uncontrollable [3]. Additionally, hiccups may cause abdominal or thoracic open surgical wounds to reopen, necessitating urgent care for these patients' hiccup symptoms. Hiccups have been treated using a range of pharmaceutical and non-pharmacological methods. However, there is no established protocol for treating hiccups in these patients.

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Even in the absence of a specific underlying condition, the stimulation of nerve branches above the vagus or diaphragm can cause hiccups to occur. Excessive eating, spicy food, drinking liquids, inhaling air, or stress-related variables (such as anxiety) can all contribute to stomach enlargement. Although persistent hiccups can have psychological or idiopathic causes, they are typically linked to underlying medical conditions [4,5]. The peripheral neural system may be stimulated in the head and neck, chest, or belly as a result of surgery or other procedures, esophagitis, stomach enlargement, ileus, infections, or lesions or tumours of the central nervous system. In other words, hiccups can result from any circumstance that stimulates the vagus nerve.

It is difficult to treat recurrent hiccups. Non-pharmacological treatments include tongue lifting, ingesting sugar water that has been concentrated, stimulating the pharynx, compressing the eyeball or carotid artery, performing a valsalva manoeuvre, and rebreathing. Anticonvulsants like phenytoin, carbamazepine, and valproic acid, gamma-aminobutyric acid analogues like baclofen and gabapentin, and dopamine receptor antagonists are some examples of pharmacological therapy (i.e., haloperidol, metoclopramide, and chlorpromazine). In the event that these don't work, surgical and nerve blocking methods can be used. However, no therapy guarantees total recovery for the vast majority of patients.

Frequent and frequently fleeting annoyances are hiccups. Rarely, persistent or uncontrollable hiccups may indicate a cardiopulmonary problem that could be fatal and necessitate clinical assessment. To determine the cause, a thorough history and physical examination should be combined with lab, imaging, and further diagnostic procedures. Chronic hiccups may be alleviated by vagal stimulation as well as treatments that target the dopaminergic and GABAergic pathways. While hiccups can be a harmless occurrence, frequent hiccups should be evaluated for serious, life-threatening illnesses that could be fatal.

Conflict of Interest

The author declares that there is no conflict of interest associated with this manuscript.

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