

Bygone Ether: Theriac to Obstinate Hiccups—Food for Thought!

Divya Hirolli¹, Rajesh Panda², Dalim K Baidya³

Keywords: Ether, Intractable hiccups, Patient-ventilator asynchrony, Weaning.
Indian Journal of Critical Care Medicine (2022); 10.5005/jp-journals-10071-24263

Sir,

The hiccup or hiccough is an imitative name that comes from the sound “hic” produced by the abrupt closure of the vocal cords following the forceful, involuntary, intermittent, spasmodic contraction of the diaphragm and the intercostal muscles. Though the clear advantage of this reflex remains a mystery for ages, the innocuous hiccups is often less worrisome unless it is pathological. The hiccup reflex arc is constituted by an afferent limb formed by the phrenic, vagus, and the sympathetic chains, central unit in the medulla and the efferent limb formed by the phrenic nerve again which is responsible for the contraction of the respiratory muscle.¹

A hiccup when lasts for more than 48 hours is termed “persistent” and for more than a month is termed “intractable” and often these incessant ones speak for an underlying serious disease. There are over 100 different associations related to these pathological hiccups; from the most common causes like the reflux esophagitis and cerebrovascular disease to the less common causes like Ebola virus disease.^{2,3} A pathological hiccup is a concern for an intensivist when the continuous spasmodic contractions of the diaphragm cause major patient ventilatory asynchrony leading to difficulty in weaning, prolonging the ICU stay and increasing the distress among the patients.

The therapy of the intractable hiccup should be targeted at the underlying etiology when possible. Often when its not possible for the definitive management we resort to various pharmacological and non-pharmacological therapies. Most of the pharmacological therapies target the GABA or the Dopaminergic pathways.

Ether is a nasal irritant and it has been shown that instillation of ether drops in nasal cavity is known to curb an acute attack of hiccups,⁴ but the exact mechanism of this action is not known. For patients with intractable hiccups in intensive care unit with endotracheal tube or tracheostomy tube *in situ* and in spontaneous mode of ventilation or T-piece we use cotton swabs soaked with ether and allow the patients to inhale the ether vapor from cotton swab by placing the swab near the proximal end of the endotracheal tube or tracheostomy tube for 15–30 seconds. We have observed that with this method hiccups subside successfully. The use of ether in ICU and operation theaters is obsolete these days, it is no more recommended as an anesthetic agent or as an agent of asepsis for skin preparation.⁵ Its use for treating persistent or intractable

^{1,3}Department of Anaesthesiology, Pain Medicine and Critical Care, AIIMS, New Delhi, India

²Department of Anesthesiology and Critical Care, AIIMS, Bhopal, Madhya Pradesh, India

Corresponding Author: Divya Hirolli, Department of Anaesthesiology, Pain Medicine and Critical Care, AIIMS, New Delhi, India, Phone: +91 7795958685, e-mail: divyahirolli@gmail.com

How to cite this article: Hirolli D, Panda R, Baidya DK. Bygone Ether: Theriac to Obstinate Hiccups—Food for Thought! *Indian J Crit Care Med* 2022;26(7):884.

Source of support: Nil

Conflict of interest: None

hiccups could be a comeback for ether in medicine. Further larger studies are needed on exploring the benefits of ether for intractable hiccups that cause patient discomfort, patient ventilator asynchrony and hinderance in weaning process.

ORCID

Divya Hirolli  <https://orcid.org/0000-0001-6213-300X>

Rajesh Panda  <https://orcid.org/0000-0001-7123-876X>

Dalim K Baidya  <https://orcid.org/0000-0001-7811-7039>

REFERENCES

- Howes D. Hiccups: a new explanation for the mysterious reflex. *Bioessays* 2012;34(6):451–453. DOI: 10.1002/bies.201100194.
- Steger M, Schneemann M, Fox M. Systemic review: the pathogenesis and pharmacological treatment of hiccups. *Aliment Pharmacol Ther* 2015;42:1037–1050. DOI: 10.1111/apt.13374.
- Shastri PS, Taneja S. Dengue and other viral hemorrhagic fevers. *Indian J Crit Care Med* 2021;25(Suppl 2):S130–S133. DOI: 10.5005/jp-journals-10071-23814.
- Moses JA, Ramachandran KP, Surendran D. Treatment of hiccups with instillation of ether into nasal cavity. *Anesth Analg* 1970;49(3): 367–368. PMID: 5534411.
- Divatia J, Mani RK, Bhagwati AM, Arunkumar AS, Singhi SC, Ramachandran B, et al. Guidelines for the prevention of infections associated with the use of vascular catheters in Indian Intensive Care Units. *Indian J Crit Care Med* 2020;17(5):3–14. DOI: 10.5005/ijccm-17-S1-3.