



Peripheral nerve stimulation (PNS) of the phrenic nerve and nebulized lidocaine for intractable hiccups: a novel use case report



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INTRODUCTION

Intractable hiccups are associated with **significant morbidity and distress**.

Management presents a **significant clinical challenge**, requiring innovative approaches beyond conventional treatments like chlorpromazine.

Emerging studies exploring **interventional approaches**.¹⁻³

CASE DESCRIPTION

73M with GERD and h/o SBO presents with 6mo of daily intractable hiccups

QoL: hindered eating, induced regurgitation, impaired speech, disrupted sleep

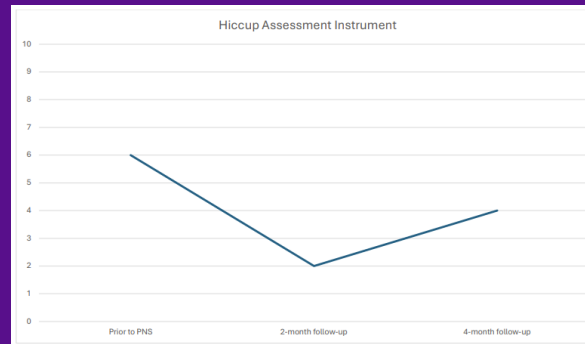
Prior meds: Gabapentin, Baclofen, Metoclopramide, Amitriptyline, Orphenadrine, Omeprazole, Chlorpromazine, Thalidomide

Prior interventions: external VNS, bilateral phrenic and stellate ganglion blocks

INTERVENTION 1

ultrasound-guided placement of bilateral phrenic nerve peripheral nerve stimulators

HAI pre- and post-phrenic PNS:



Effect on HAI after nebulized lidocaine:



PNS RESULTS

Hiccup Assessment Instrument improved from 6/10 to 2/10 at 2-month follow-up to 4/10 at 4 months.

Renewed ability to speak and sing

INTERVENTION 2

Patient return at 10-month follow-up with HAI 6/10.

Treated with 4cc of 2% nebulized lidocaine

HAI decreased that day to 3/10.

DISCUSSION

Phrenic PNS: Peripherally induced reconditioning of CNS.

Advantages: minimally invasive, parameters titrated to patient response, ultrasound-guided

Applications: thoracic procedures, prevent wound dehiscence?⁴

Inhaled lidocaine: relax bronchial smooth muscle^{5,6}

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