

CORRESPONDENCE

11. Bhalotra R: Baclofen therapy for intractable hiccoughs. *J Clin Gastroenterol* 1990; 12:122

12. Krahn A, Penner SB: Use of baclofen for intractable hiccups in uremia. *Am J Med* 1994; 96:391

13. Guelaud C, Similowski T, Bizec JL, Cabane J, Whitelaw WA, Derenne JP: Baclofen therapy for chronic hiccup. *Eur Respir J* 1995; 8:235-7

14. Ramirez FC, Graham DY: Treatment of intractable hiccup with Baclofen: Results of a double-blind randomized, controlled, cross-over study. *Am J Gastroenterol* 1992; 87:1789-91

15. Petroianu G, Hein G, Petroianu A, Bergler W, Rüfer R: Idiopathic chronic hiccup: Combination therapy with Cisapride, Omeprazole and Baclofen. *Clin Ther* 1997; 19:1031-8

16. DeJong RH: Neurontin: Pie in the sky o pie on the plate? *Pain Digest* 1996; 6:143-4

17. Petroianu G, Hein G, Petroianu A, Bergler W, Rüfer R: ETICS-Studie: Empirische Therapie des Idiopathischen Chronischen Singultus. *Z Gastroenterol* 1998; 36 (in press)

(Accepted for publication July 7, 1998.)

Anesthesiology

1998; 89:1285

© 1998 American Society of Anesthesiologists, Inc.

Lippincott Williams & Wilkins

In Reply:—We did not claim that “the failure of simple hiccup-terminating maneuvers warrants proceeding directly to potentially damaging ‘last-resort’ maneuvers such as phrenic nerve interruptions.” Instead, we fully agree with Dr. Petroianu’s claim that “the logical next step (after failure of simple maneuvers) is the use of appropriate drugs.” Our statement, “block of the phrenic nerve has been suggested as ‘the last resort,’”¹ means that the use of this block should be considered if other less-invasive methods, including the use of potentially effective drugs, have failed. Most patients with intractable hiccups are referred from other departments in which a variety of methods, including potentially effective drugs such as baclofen, have been used in vain, although we did not described these explicitly.

The main point we made in our report¹ was not advocating the phrenic nerve block but that the use of electric nerve stimulation enables one to avoid unnecessary attempts at repeated blocks. In fact, in one of our patients,¹ we judged that a successful block of the phrenic nerve would not decrease hiccups and abandoned this method. There is no “holy grail” for intractable hiccups: neither baclofen nor phrenic nerve block is always effective. The importance—we believe—is to judge whether each treatment method is effective in each patient and to stop ineffective methods at an early stage.

Anesthesiology

1998; 89:1285-6

© 1998 American Society of Anesthesiologists, Inc.

Lippincott Williams & Wilkins

Yasuhisa Okuda, M.D.

Associate Professor of Anesthesiology
y-okuda@dokkyomed.ac.jp

Toshimitsu Kitajima, M.D.

Professor

First Department of Anesthesiology
Dokkyo University School of Medicine
Mibu, Tochigi, Japan

Takashi Asai, M.D., Ph.D.

Research Associate
Department of Anesthesiology
Kansai Medical University
Osaka, Japan

Reference

1. Okuda Y, Kitajima T, Asai T: Use of a nerve stimulator for phrenic nerve block in treatment of hiccups. *ANESTHESIOLOGY* 1998; 88:525-7

(Accepted for publication July 7, 1998.)

Hypoxic Apnea, Epidural Anesthesia, and Infants

To the Editor:—In reviewing the recent report by Hogan *et al.*¹ regarding hypoxic apnea in rabbits receiving epidural anesthesia, I was struck by the similarity of their report to a phenomenon seen in hypoxic newborn and premature infants: to wit, a brief hyperventilatory response followed by hypoventilation and apnea.² In many ways, the newborn or premature infant is similar to the authors’¹ rabbit-with-epidural-anesthesia model. Obviously, the blood pressure of the newborn or premature infant is much lower than that in an older child or adult. At the same time, infants

exhibit primarily parasympathetic tone; this is seen in their exaggerated bradycardic responses to laryngoscopy, anesthetics, and succinylcholine, and in the absence of hypotension after pharmacologic sympathectomy with spinal or epidural anesthesia. These similarities between the rabbit-with-epidural-anesthesia model and the newborn or premature infant led me to wonder whether there might be a common mechanism for hypoxic apnea and a role for blood pressure augmentation, adrenergic agonists, or vagolytics in the prevention or treatment of infant apnea.