

## Ventricular Tachycardia as a Complication of Digital Rectal Massage

To the Editor:

I found the case report, "Termination of Paroxysmal Supraventricular Tachycardia By Digital Rectal Massage" by Roberge et al [November 1987;16:1291-1293] to be quite interesting. Recently, I had the occasion to perform the maneuver and would like to report the results.

The patient was a 50-year-old woman with sudden onset of palpitations and progressive dyspnea without chest pain for approximately three hours. In the emergency department, her initial heart rate was 200 with a blood pressure of 108/70 mm Hg. In an attempt to convert the supraventricular tachycardia, the Valsalva maneuver was attempted several times, followed by carotid massage without success. Digital rectal massage was next attempted, and on the second circumferential motion the patient's rhythm converted to ventricular tachycardia for nine seconds. It

then converted spontaneously to a sinus tachycardia at a rate of 130, blood pressure of 130/80 mm Hg, and resolution of palpitations, dyspnea, and anxiety (hers and mine).

Ultimately, the digital rectal massage maneuver was very effective but the interval of ventricular tachycardia was quite worrisome. Because Roberge was the first to report the termination of paroxysmal supraventricular tachycardia by the use of digital rectal massage, I would like to report the first case of ventricular tachycardia (albeit uneventful) as its complication.

Mark E Lieberman, MD  
Division of Emergency Medicine  
Thomas Jefferson University Hospital  
Philadelphia, Pennsylvania

## Termination of Intractable Hiccups With Digital Rectal Massage

To the Editor:

I read with interest the case report by Roberge et al and would like to report a related phenomenon.

A 27-year-old man presented to the emergency department complaining of intractable hiccups during the preceding 72 hours. The patient had a lifelong history of frequent episodes of hiccuping; however, the longest prior episode was two hours, and all previous episodes had resolved spontaneously. The patient's medical history was remarkable only for occasional beer consumption. He denied cigarette smoking and the use of any prescription, over-the-counter, or illicit drugs. Physical examination on presentation revealed a healthy-appearing muscular man hiccuping at a frequency of approximately 30 per minute. Blood pressure was 115/80 mm Hg; pulse, 72; respirations, 18; and temperature, 37 C. Examination of the pharynx revealed no abnormalities. Lungs were clear and cardiac examination was normal. Examination of the abdomen revealed no masses or hepatosplenomegaly.

Initially, gagging and tongue pulling maneuvers were attempted with no change in symptomatology. Valsalva maneuvers, carotid sinus massage, and digital eyeball compression all were attempted with a resulting decrease in the frequency of the hiccups to 15 per minute during the maneuvers, but with a prompt return to the original frequency following cessation of the maneuvers. Digital rectal massage was then attempted using a slow circumferential motion. The frequency of hiccups immediately began to slow, with a termination of all hiccups within 30 seconds. There was no recurrence of the hiccups during the next 30 minutes and the patient was discharged without further workup.

Hiccups result from a sudden reflex spasm of the diaphragm and accessory inspiratory muscles followed by an abrupt glottic closure.<sup>1</sup> The reflex serves no known purpose, and the list of reported cures is almost as long as the list of causes.<sup>1-5</sup> The reflex center is located in the spinal cord be-

tween the third and fifth cervical segment with the afferent limb mediated by the vagus nerve and the efferent limb by the phrenic nerve.<sup>1</sup> An increase in the vagal tone is the proposed mechanism for the success of carotid sinus massage, digital eyeball pressure, Valsalva maneuver, and pharyngeal stimulation.<sup>1,6-8</sup> The rectum is supplied with an abundance of sympathetic and parasympathetic nerves,<sup>6</sup> and theoretically digital rectal massage would lead to increased vagal tone and potential termination of hiccups.

Reported is the first case of digital rectal massage employed for the termination of intractable hiccups. It should be considered in cases of intractable hiccups prior to preceding with pharmacologic agents.

Francis M Fesmire, MD  
Division of Emergency Medicine  
University Hospital  
Jacksonville, Florida

- Lewis JH: Hiccups: Causes and cures. *J Clin Gastroenterol* 1985;7:539-552.
- Stalnikowicz R, Fich A, Troudart T: Amiripryline for intractable hiccups (letter). *N Engl J Med* 1986;315:64-65.
- Ives TJ, Fleming ME, Weart CW, et al: Treatment of intractable hiccups with intramuscular haloperidol. *Am J Psychiatry* 1985;142:1368-1369.
- Williamson BWA, MacIntyre IMC: Management of intractable hiccup. *Br Med J* 1977;2:501-503.
- Soudgian JV, Cain JC: Intractable hiccup: Etiologic factors 220 cases. *Postgrad Med* 1968;43:72-77.
- Roberge R, Anderson E, MacMath T, et al: Termination of paroxysmal supraventricular tachycardia by digital rectal massage. *Ann Emerg Med* 1987;16:1291-1293.
- Josephson ME, Seides SE, Botsford WB, et al: The effects of carotid sinus pressure in recurrent paroxysmal supraventricular tachycardia. *Am Heart J* 1974;88:694-697.
- Peters RW, Scheinman MM: Emergency treatment of supraventricular tachycardia. *Med Clin North Am* 1979;63:73-92.