

CORRESPONDENCE

Anesthesiology
64:654, 1986

To enhance the timeliness of publication of Letters to the Editor, the Editorial Board approves the changes whereby pre-publication proofs of Letters accepted for publication will no longer be available. Additional guidelines regarding Letters to the Editor can be found in the Guide for Authors.

Bilateral Uterine Displacement Device

To the Editor:—To prevent aortocaval compression during cesarean section, several inflatable devices have been described. Redick proposed the use of a 3-l urologic irrigation solution bag connected to a sphygmomanometer bulb.¹ Wagner and Graner suggested a similar device that allows oxygen from the anesthesia machine to inflate the bag *via* the regular iv-administration set.² The fact that left uterine displacement (LUD) and occasionally right uterine displacement (RUD)* is physiologically preferred to the supine position was considered by us in creating the bilateral uterine displacement device.

Our apparatus consists of two 3-l bags, stiff tubing (such as the type used for urologic or arthroscopic fluids), and a connector from an endotracheal tube #7 (fig. 1). The use of two bags, one under each hip, allows for quick LUD or RUD conveniently toward the side on which the operator stands. The connector allows immediate oxygen inflation of the selected bag directly from the anesthesia machine; therefore, the need of the sphygmomanometer bulb suggested in the past is completely eliminated.

In addition, the use of stiff tubing protects it from accidental occlusion or kinking by the patient lying on it.

We also believe that our application could be used intraoperatively, not only in obstetrics but also in the case of morbid obesity or large abdominal or pelvic tumors, to counteract similar pathophysiologic changes induced by the supine position.

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* Ostheimer GW: Obstetric anesthesia, Annual refresher Course Lectures. American Society of Anesthesiologists, Annual Meeting, 1983, p 401.

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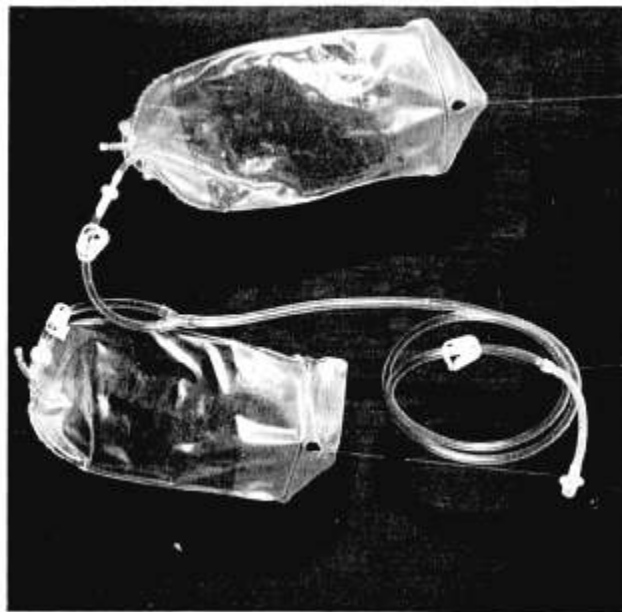


FIG. 1. Bilateral uterine displacement device.

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2. Wangler MA, Craner DF: Another method to provide left uterine displacement. *ANESTHESIOLOGY* 62:700, 1985

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Alarms: Help or Hindrance?

To the Editor:—The increase of intraoperative monitoring devices has been accompanied by an increase in

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the number of audible alarms in the operating room environment. Most audible alarms are loud, produce continuous noxious signals that cannot be adjusted or silenced, and are mostly designed for use in the intensive care unit, where signals audible some distance from the patient might be useful. The potential hazards associated

with several loud alarms signalling in close proximity to one another and the confusion that this can create in intensive care unit personnel has been recognized by Hayes and Kerr.¹ Alarms of this type are out of place in the operating theater, where an anesthetist attends to only one patient and needs no signal audible at a distance. An audible alarm that quickly rather than loudly calls attention to a problem, that can be adjusted to signal over the desired range of the parameter measured, and that has a volume control and a temporary silencing mode is one that will be used routinely and not circumvented. In times of emergency it is more effective for anesthesiologists to immediately deal with a problem called to their attention by a pleasant sound than it is to waste effort in silencing a noxious signal.

Presently, manufacturers of monitoring equipment can incorporate any quality of sound in audible alarms regardless of whether that sound is used in other equipment. Confusion occurs regularly in our operating theater in trying to distinguish the audible signal of our continuous infusion pumps from that of our oxygen analyzers. Confusion increases as the number of pieces of equipment with audible signals increases. During one recent operation for aortic reconstruction, 12 audible alarms on anesthetic and operating room equipment were counted, of which only 8 could be identified by the staff anesthesiologist present. Aircraft industry studies have shown that humans do not learn and remember the significance of more than six to seven sounds.¹ This suggests that the

number of audible signals used in the operating room should be limited to only certain physiologic functions and equipment. The quality of those audible signals should be standardized. For example, the alarm that signals "failure to ventilate" should be different from that which signals "delivery of a hypoxic gas mixture," and both should be readily recognizable to all anesthetists.

The increase in new monitoring equipment used in the surgical suite may be impairing the function of the most important monitor, the anesthesiologist. We suggest that standards for operating room alarm systems be developed to insure the effective application of new monitoring technology and to prevent the introduction of systems that create problems due to the cacophony associated with their use.

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Alarms that Speak

To the Editor:—The recent letter by Samuels,¹ which relates to the cacophony of noises generated by multiple alarm systems, is a forecast of further future problems. As more and more monitoring equipment is advertised in the pages of ANESTHESIOLOGY, one can only look forward to more beeps and banshee howls, to the bafflement of the anesthesiologist and the irritation of the surgeon. I own an alarm clock that talks, and one company manufactures a "user friendly" camera that speaks—in English. If a small camera can contain enough memory to remind me verbally to advance the film, put in new film, or use a flash, surely it is not beyond the capability of biomedical engineering to use the same principle to warn

me of decreasing FI_{O_2} or hypotension. In addition, if Dr. Samuels really wants to hear "Galway Bay," then I am sure a suitable vocal arrangement is also possible.

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