

Correspondence

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The First Endotracheal Intubation

To the Editor:—In a recent clinical report, Katz and Berci¹ stated that Vesalius in 1543 reported “. . . that a pregnant pig was kept alive by blowing through a reed inserted into the trachea . . .” and that “This is perhaps the first example of ventilation via the trachea.” The first intubation of the larynx and the trachea was actually reported at the beginning of the second millennium. Avicenna (980–1037) describes it with the following words: “. . . a golden or a silvern or from a similar material made tubus can be sometimes inserted into the neck . . .”² It is also interesting to note that Avicenna preferred tracheal intubation to tracheotomy. Only when laryngotracheal intubation fails to improve the patient's condition should tracheotomy be performed.

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Management of a Difficult Airway in Obstetrics

To the Editor:—We have also encountered the problem addressed by Drs. Marx and Finster,¹ the paralyzed patient whose trachea the anesthesiologist cannot intubate and whom he cannot ventilate. A recent, near-disastrous experience at UCSD suggests that their third recommendation, the presence of a sterile tracheostomy tray or the tube device described by Stinson, may lead to a false sense of security.

Few obstetricians are skilled or experienced in emergency tracheotomy; tracheotomy is made particularly hazardous and difficult by urgency, the venous distention of pregnancy, and the same difficulties that made intubation impossible.

The Stinson device, a 12-gauge intravenous cannula connected to a resuscitation bag, delivers a gas flow (70 ml/sec measured by Med Science 570 Wedge Spirometer) inadequate to establish normal alveolar ventilation. I am unaware of any report of its successful use to ventilate a paralyzed patient.

Spoerel *et al.*^{2,3} have demonstrated effective needle transtracheal ventilation in paralyzed patients, utilizing a 16-gauge intravenous cannula intermittently

connected to the 50-psi hospital piped oxygen supply. Control may be effected by a thumb-operated valve, available as a Sanders Jet Ventilator® or readily fabri-

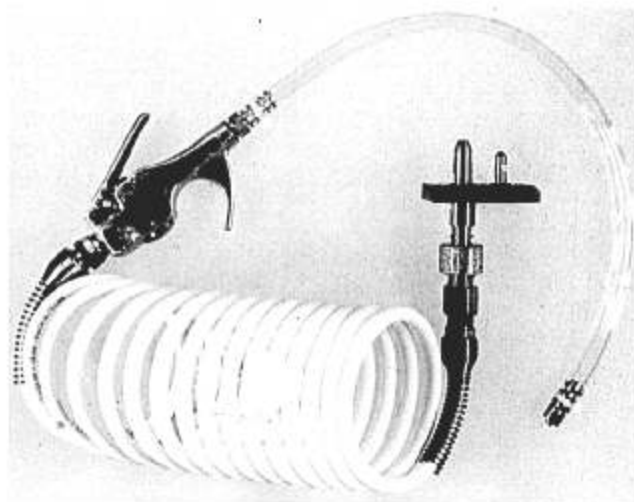


FIG. 1. Emergency jet ventilator.

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cated, as we have done, from a mechanic's blowgun (Sears Cat. #30 GT 15236) (fig. 1). This latter combination generates flows of 500–600 ml/sec, which, when directed axially down the trachea, generate pressures commonly used in IPPV.⁴

Major complications include massive subcutaneous emphysema after inflation of an extratracheal catheter and pneumothorax after continued inflation of the trachea in the presence of fixed expiratory obstruction; these are avoidable by good technique. Local bleeding, emphysema, and infection are also possible.

The jet ventilator does provide a means rapidly and effectively to ventilate the paralyzed patient whose glottis will admit neither oxygen nor endotracheal tube, and it may be an effective resuscitation tool in the obstetric suite. Residents here have readily demonstrated proficiency in using it in the dog lab. Nevertheless, its use in the emergency situation described has not been documented, and the presence of this or any other gadget should not preclude careful pre-

anesthetic airway assessment or good intraanesthetic judgement.

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A Halothane-abuse Fatality

To the Editor:—Concurrent with the introduction of general anesthetics has been their nonmedical use as "social drugs." Nineteenth-century ether and N₂O parties figure prominently in the anesthetic literature,¹ and ketamine is now popular as a street drug because of its hallucinogenic properties.² To date, halogenated inhalational anesthetics have been abused infrequently,^{3–4} primarily by medical personnel. Notwithstanding this, their potential utilization with malefic consequences should not be underestimated, as we discovered recently.

A previously healthy 19-year-old man sustained at home a cardiopulmonary arrest from an overdose of halothane. How he acquired the drug and his previous drug abuse history are unknown. Apparently he had been self-administering the drug using an open-drop technique. He was found comatose by his wife after an indeterminant interval. Cardiopulmonary resuscitation was begun by fire department paramedics, and subsequently he was transported to our facility. Upon admission, severe hypoxic encephalopathy was seen, and the blood halothane concentration was 200 µg/ml.⁵ He died a week later without any neurologic recovery. No pulmonary, hepatic or renal damage was seen at autopsy.

The lesson from this case is obvious. Halothane, together with the other anesthetic agents, must be

regarded as a potentially lethal drug when used for illicit purposes. Every effort must be made to prevent its pilferage and curb its abuse. Furthermore, an educational program by either the FDA or the ASA is indicated, to alert the medical community about this dangerous practice.

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