

REFERENCES

- 1 Kubota Y, Toyoda Y, Kubota H. Face mask fitting for edentulous patients. *Anesth Analg* 1993; 76: 450.
- 2 McGee IP II, Vender IS. Nonintubation management of the airway. In: Benumof JL (Ed.). *Clinical Procedures in Anesthesia and Intensive Care*. Philadelphia: JB Lippincott Co., 1992; 89-114.
- 3 Fisher JA, Ananthanarayan C, Edelist G. Role of the laryngeal mask in airway management. *Can J Anaesth* 1992; 39: 1-3.
- 4 Brain AII. The laryngeal mask - a new concept in airway management. *Br J Anaesth* 1983; 55: 801-5.

A combined ventilating-wedging device for the parturient

To the Editor:

The difficult airway in the obstetric patient is often unpredictable. In the obstetric population the risk of failed intubation has been reported to be as great as 1 in 300 undergoing Caesarean section,¹ which is almost eight times that in the general surgical patient population. There is also a relatively high incidence of "failed" intubation in obstetric patients as the frequency of emergency surgery can create hurried situations which may preclude a careful evaluation of the airway before induction. Tunstall² was the first to establish a "failed intubation drill" to assure maternal oxygenation and ventilation when intubation cannot be achieved. If intubation is unsuccessful and mask ventilation fails, one can support maternal oxygenation by performing a cricothyrotomy with a large gauge needle and transtracheal jet ventilation.

At our institution we have prepared for obstetrical emergency airway situations by equipping our operating rooms with a jet ventilator device which serves two important functions. The jet ventilator is attached via connecting tubing and a three-way stopcock to a 3000 ml/irrigation bag³ (Figure). When a patient for Caesarean section is brought to the operating room for surgery the bag is placed under the right hip and inflated using the jet ventilator to wedge the patient. "Wedging" the patient with this device ensures the jet ventilator is working properly and provides left uterine displacement (LUD) within seconds. In the event of a failed intubation, the device can be disconnected at the stopcock and used to ventilate the patient's lungs. Disconnecting with the stopcock in a closed position to the wedging device will maintain left

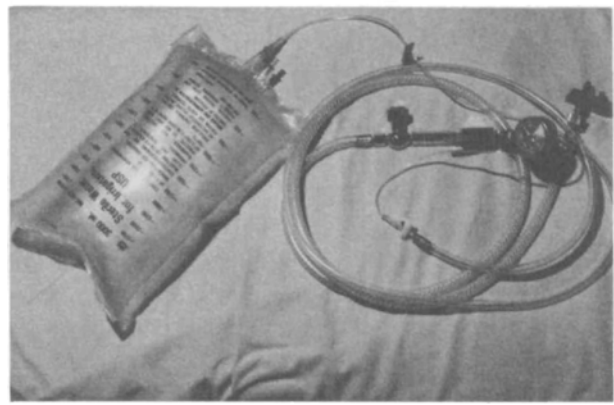


FIGURE Bivona Carden Intermittent Jetting Device connected to an inflated 3000 ml irrigation bag.

uterine displacement during performance of transtracheal ventilation.

Utilizing such a set-up serves a dual purpose in the obstetrical patient. It very efficiently provides left uterine displacement which is essential in preventing aortocaval compression as well as functioning as a means of ventilation in an emergency airway situation.

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REFERENCES

- 1 Lyons G. Failed intubation. Six years' experience in a teaching maternity unit. *Anaesthesia* 1985; 40: 759-62.
- 2 Tunstall ME. Failed intubation drill. *Anaesthesia* 1976; 31: 850.
- 3 Redick LF. An inflatable wedge for prevention of aortocaval compression during pregnancy. *Am J Obstet Gynecol* 1979; 133: 458-9.

Anaesthetic management of a patient with Moyamoya disease for Caesarean section

To the Editor:

Moyamoya disease is a rare occlusive disease involving the large intracranial arteries and presents with ischaemic

neurological deficits or intracranial haemorrhage.¹ We anaesthetised a patient with Moyamoya disease for an elective Caesarean section. Anaesthesia was induced, after alfentanil 1 mg, with thiopentone and succinylcholine, the trachea was intubated and the lungs ventilated with N₂O/O₂ isoflurane. Muscle relaxation was produced with atracurium and reversed with atropine and neostigmine. Fentanyl provided intraoperative analgesia. The patient remained stable during operation and made an uneventful recovery. Neurological deterioration may occur during pregnancy or labour in these patients: possible causes in pregnancy include increased cardiac output² and hypercoagulability. During labour, bearing down increases intracranial pressure and hyperventilatory hypercapnia may cause cerebral vasoconstriction. Hence elective Caesarean section has been recommended.³ The decrease in blood pressure associated with regional techniques (epidural or spinal anaesthesia) may lead to decreased cerebral perfusion, which may not be compensated by cerebral autoregulation in the setting of a fixed stenotic lesion. A case report of convulsions after spinal anaesthesia in a child with this disorder illustrates this possibility.⁴ General anaesthesia has some hazards in these patients. The hypertensive response to laryngoscopy should be attenuated, hyperventilation should be avoided and the end tidal CO₂ should be maintained above 4.5 kPa. Isoflurane is the vapour of choice in view of its potentially beneficial effects on cerebral blood flow. Our decision in favour of general anaesthesia was influenced by: a successful outcome after general anaesthesia for her previous Caesarean section, other published reports of safe general anaesthesia for neurosurgical procedures in these patients⁵ and our belief in the haemodynamic stability of a well conducted general anaesthesia. The potential complications of and the paucity of information on regional anaesthesia made us decide against such a technique in this patient.

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REFERENCES

- 1 Suzuki J, Kodoma N. Moyamoya disease – a review. *Stroke* 1983; 14: 104–9.
- 2 Enomoto H, Goto H. Moyamoya Disease presenting as intracerebral hemorrhage during pregnancy: case report and review of the literature. *Neurosurgery* 1987; 20: 33–5.
- 3 Miyakawa I, Lee HC, Haruyuma Y, et al. Occlusive disease of the internal carotid arteries with vascular collaterals (Moyamoya disease) in pregnancy. *Arch Gynecol* 1986; 237: 175–80.
- 4 Yasukawa M, Yasukawa K, Akagawa S, Nakagawa Y, Miyasaka K. Convulsions and temporary hemiparesis following spinal anesthesia in a child with Moyamoya disease (Letter). *Anesthesiology* 1988; 69: 1023–4.
- 5 Brown SC, Lam AM. Moyamoya disease – a review of clinical experience and anaesthetic management. *Can J Anaesth* 1987; 34: 71–5.