We “can do it” does not mean we “should do it”: obesity, umbilical cord prolapse, and spinal anesthesia in the knee-chest position

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To the Editor,

In the September 2008 issue of the *Journal*, Ginosar et al.¹ described the management of a morbidly obese parturient with umbilical cord prolapse (UCP) and a stable fetal heart rate (FHR), who was administered spinal anesthesia in the knee-chest position for urgent Cesarean delivery. While the management was successful, we offer comments and address systematic flaws that may reduce the likelihood for the need to use unorthodox management.

While UCP is rare (incidence 0.15–0.2%), unfortunately, the need for operative delivery and anesthesia intervention in the obese obstetric population is not uncommon and should be anticipated. The difficulties of neuraxial anesthesia in morbidly obese parturients are well established.² This report describes a parturient in active labour who had spent an hour on the labour ward without undergoing an anesthesia evaluation. We recommend that a proactive labour ward policy be developed for early identification of such patients, so as to facilitate thorough airway assessment, early placement of an epidural catheter, and assessment of adequate function for rapid conversion to surgical anesthesia.

Neonatal outcome studies associated with UCP have suggested that intrapartum hypoxic injury is rare.³ These and other findings suggest that a calm approach be taken in lieu of an “anesthesia dash for the obstetric crash”. Intra-uterine resuscitation (100% oxygen, elevation of the presenting fetal part, and maternal positioning) often converts an emergent to an urgent situation, as in this case. The Obstetric Anaesthesiologists Association opinion survey suggests that UCP does not mandate the need for general

anesthesia.⁴ We support this view and suggest there is often time to appropriately assess such patients and to consider regional anesthesia, possibly allowing provision of safer care.

With a reassuring FHR in the OR, time should be taken to carry out a complete airway assessment, to summon skilled assistance, and to allow for difficult airway adjuncts to be in place. With the fetal presenting part still elevated, it should be possible for a prepared surgical team to undertake a trial of positioning the patient in the lateral position for an attempt to place neuraxial anesthesia. We would challenge that an airway examination of a parturient in the prone position is unlikely to provide a useful assessment of the difficulty of direct laryngoscopy.

The questionable ability to obtain free-flowing CSF, the unpredictable spread of hyperbaric local anesthesia, and the greater risk of bradycardia and hypotension in the prone position would all suggest that this approach is not justifiable in a patient with a reassuring FHR and an anticipated difficult laryngoscopy.⁵ Because we “can do it” does not mean we “should do it”.

Conflicts of interest The authors have no conflict of interest to disclose.

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Reply

We read, with interest, the letter from McKeen et al.¹ regarding our report concerning a case of cord prolapse which presented with prolonged variable decelerations, but which responded to elevating the fetal presenting part and positioning the mother in the knee-chest prone position. The mother was quickly transferred to the operating room in this position, where we identified several additional risk factors for general anesthesia, including morbid obesity, predicted difficult tracheal intubation, a recent meal, and bronchial asthma. We performed spinal anesthesia in the knee-chest prone position.

A “trial of positioning the patient in the lateral position for an attempt to place neuraxial anesthesia”, as advocated by McKeen et al., would have required abandoning the maternal position in which the fetal heart rate had recovered and relocating the fetal heart rate monitor. We felt that doing this would increase the likelihood of further decelerations, and, in turn, increase the demand for a potentially hazardous general anesthetic.

Their concerns regarding the distribution of anesthesia and hemodynamic stability were based on a study where patients were kept for 20 min in either the knee-chest position or the supine position after spinal anesthesia.² In our report, the patient was immediately positioned supine (with uterine displacement) in readiness for surgery after spinal drug administration. Also, in that study, investigators used a 27G Quincke spinal needle, and the free flow of cerebrospinal fluid (CSF) was impaired, although CSF was aspirated easily.² In our report, we aspirated CSF, but we also used a 27G pencil point tip with a 22G shaft (Poly-med, Temena International, Carriere-sur-Seine, France), which gives a far greater free flow of CSF than a regular 27G needle.

Rather than unpredictability, we believe that unfamiliarity is the main concern with this technique. The labour unit is a volatile location and a flexible approach is often required. In particular, as morbid obesity in pregnancy is

increasingly common and associated with significant risk,^{3,4} anesthesiologists should develop a wide repertoire of techniques for non-standard situations.

In our report, we stressed the importance of pre-emptive epidural analgesia in these patients. Written policies to identify and assess morbidly obese and other high risk parturients have existed in our unit for some years, both in our antenatal obstetric anesthesia clinic and in the labour unit; however increasing workload, chronic understaffing, and the ubiquitous underutilization of obstetric anesthesia referrals by obstetricians combine to make the implementation of such policies inconsistent.

We agree that we “can do it” does not mean that we “should do it”, particularly in routine practice. However, knowing that we “can do it” means that the next time, in this imperfect world, that one of our colleagues is faced with an unevaluated, recently fed, morbidly obese, prone parturient with umbilical cord prolapse and a difficult airway, he/she can consider spinal anesthesia in the knee-chest prone position to be a reasonable anesthetic management option.

Conflicts of interest The authors have no conflict of interest to disclose.

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