It is important to keep in mind that hypotension, by decreasing the respiratory centre perfusion, can produce apnoea as effectively as a high motor block. The only difference is in the time it lasts.

Armando Fortuna MD
Department of Anesthesiology
Beneficência Portuguesa Hospital
Santos, SP. Brazil

REFERENCES

1 *Palkar NV, Boudreaux RD, Mankad AV.* Accidental total spinal block: a complication of an epidural test dose. Can J Anaesth 1992; 39: 1058–60.
2 *Fortuna A, Fortuna AO.* Complicações e acidentes em bloqueios regionais (anestesias requídeas e paeridural). Rev Bras Cir, 1989; 79: 5–10.
3 *Greene N.* Physiology of Spinal Anesthesia, 3rd Ed, London: Williams & Wilkins, 1981. 126

REPLY

Thank you for giving us the opportunity to respond to Dr. Fortuna's comments.

It is possible that apnoea in this patient can partly be from hypotension and brainstem hypoperfusion, but she did develop flaccid paralysis in her upper extremities which means that motor paralysis in the cervical region had, indeed, taken place. The block, however (both sensory and motor), started regressing fairly quickly. The clincal picture developed with remarkable speed and consequences could have been disastrous. Understandably, therefore, we were occupied by measures at resuscitation and saving the baby. We are not, therefore, sure if the actual recovery of the block coincided with the restoration of blood pressure or it was "spontaneous."

Measures were taken to avoid aorta-caval compression in the mother. She was placed in the left lateral recumbent position until the baby was delivered.[1]

"Total Spinals" do occur accidentally after a massive epidural dose of local anaesthetic gets into the subarachnoid space. Whether our case can or cannot be called a "total spinal" is of academic interest only. The purpose of our report was to emphasize the importance of being watchful, to recognize and treat the consequences of a neuraxial block (or a test dose) in a parturient as speedily as possible to prevent any long-lasting deleterious effects on the mother or her infant.

We chose to administer a general anaesthetic to our patient for the following reasons: (1) by the time she was being transferred to the OR, the block (both sensory and motor), was receding and since only 45 mg of lidocaine had been used, we were not sure if this would provide adequate analgesia for the surgery. (In our institution, the operating time for C-sections is about one hour.) (2) This patient exhibited an unusual response to 45 mg lidocaine. We, therefore, did not consider it appropriate, at this time, to try another dose or another local anaesthetic agent. (3) The foetus had developed foetal distress (FHR ~ 60 min^{-1} with late decelerations) and the quickest way to deliver the baby is by administering a general anaesthetic.

We thank Dr. Fortuna for showing interest in our case report.

Neelkanth V. Palkar MD FFARCS
Randall C. Boudreaux MD
Aparna V. Mankad MD
Department of Anesthesiology
University of South Alabama Medical Center
Mobile, AL 36617. USA

REFERENCE

1 *Palkar NV, Boudreaux RC, Mankad AV.* Accidental total spinal block: a complication of an epidural test dose. Can J Anaesth 1992; 39: 1058–60.

Accidental total spinal block (2)

To the Editor:

In their discussion of the possible cause of the total spinal block following an "epidural" test dose of 1.5% lidocaine 3 ml with epinephrine 1:200,000 15 μg, the authors did not consider iso- or hypobaricity of the anaesthetic in a sitting patient and a cephalad-threaded catheter.[1] In 30 healthy, nonfasting parturients, cerebrospinal (CSF) specific gravity ranged from 1.0009 to 1.0063.[2] Although the patient described had received one litre of *iv* electrolyte solution, she most likely had been fasting for some time raising her CSF specific gravity to the upper range. The specific gravity of 1.5% lidocaine is 1.0064 at room temperature (25°C), but the specific gravity of drugs is consistently lower at body temperature (37°C). Thus, the specific gravity of 2% chloroprocaine CE measures 1.010 at 25°C, but 1.0044 at 37°C.[3] Since a small volume of drug injected into the CSF at room temperature approaches body temperature within seconds,[4] one may assume that the lidocaine specific gravity in this case was at a low level.

A similar complication was repeated following accidental intrathecal injection of 2.5 ml of 2% chloroprocaine through a cephalad-threaded catheter in a parturient in a head-up position.[3] Since most local anaesthetics are hypobaric at body temperature, test doses should not be administered with the patient in a sitting position when administration of the block is difficult.

Michael A. Foster MD
Gertie F. Marx MD
Department of Anesthesiology
Albert Einstein College of Medicine
Bronx, New York 10461

REFERENCES

1 *Palkar NV, Boudreaux RC.* Accidental total spinal block: a complication of an epidural test dose. Can J Anaesth 1992; 30: 1058–60.
2 *Marx GF, Orkin LR.* Cerebrospinal fluid proteins and