Correspondence

BIS et pneumencéphale

La position assise en neurochirurgie expose au risque de survenue de plusieurs complications dont l'embolie gazeuse et le pneumencéphale. Leur diagnostic repose sur l'imagerie tomodensitométrique ou par résonance magnétique réalisée au décours d'un retard de réveil. La surveillance per opératoire comporte habituellement : électrocardioscope, oxymètre, capnographe, mesure invasive de la pression artérielle, doppler œsophagien, et cathétérisme droit.¹ Récemment, la mesure de la profondeur de l'anesthésie par analyse bispectrale (BIS) a été introduite.²

Nous rapportons le cas d'un patient de 68 ans aux antécédents d'accident ischémique transitoire opéré d'un épéndymome du 4^{ème} ventricule. L'anesthésie générale a été obtenue par l'association propofol-rémifentanyl.

FIGURE Coupe scannographique montrant un volumineux pneumencéphale frontal

Pendant toute l'intervention aucune modification des paramètres de surveillance pouvant faire évoquer la survenue d'une complication n'a été notée. Le BIS™ (A-1000 Aspect® Medical Systems, Natick, MA) est resté entre 40 et 60%. Compte tenu de ces éléments, et du type d'anesthésie, un réveil sur table a été envisagé. Dès la remise en décubitus dorsal, le BIS™ est devenu inopérant (indice de qualité à 0%) alors que les électrodes étaient toujours en place. Un réveil de mauvaise qualité a conduit à la réalisation d'un examen tomodensitométrique. Celui-ci a révélé un volumineux pneumencéphale frontal (Figure) expliquant l'absence de lecture par le BIS™.

Le BIS™ est un moniteur de la profondeur d'anesthésie mais une anomalie de lecture doit, jusqu'à preuve du contraire, faire rechercher un événement pathologique en l'absence de dysfonctionnement de l'appareil.

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Arrhythmias during spinal anesthesia for Cesarean section - does high spinal block correlate?

To the Editor:

The prospective study of Shen and colleagues¹ is important in alarming us of the higher incidence of arrhythmias than expected during spinal anesthesia, especially for Cesarean section procedures. Their results revealed only increasing age correlated significantly with the incidence of potentially dangerous arrhythmias. The authors suggested four mechanisms to explain the high incidence of intraoperative arrhythmias, including blockade of cardiac sympathetic stimu-

lation or increase of vagal tone. The procedure, i.e., Cesarean section itself requires relatively high sensory block up to T₄.² As the authors mentioned, sympathetic blockade might be two segments higher than the sensory block. If the spinal block is higher than T₄ level, the chance of thoracic and even cervical ganglia blockade, suffocation leading to hypoxemia and hypercarbia, and the use of drugs which could provoke arrhythmias will be increased. Unfortunately, however, I could not find any comment about the correlation between the incidence of arrhythmias and (1) the level of spinal blockade, (2) frequency and dosage of drugs given, or (3) incidence of subjective and/or objective difficulty in breathing, all of which seems to be the important factors for arrhythmias in high level spinal anesthesia. Further analysis might give us more information from your precious study.

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REPLY:

We appreciate the thoughts of Dr. Lee in our recent report. In fact, we are also interested in the correlation between the arrhythmias and block height, pharmacological intervention, patient symptoms or surgical stimulation. However, the pathogenesis of arrhythmias during spinal anesthesia is complicated. Even the sympathovagal changes induced by spinal anesthesia remain controversial.^{1,2} Our case numbers were too small for a meaningful comparison. We only tried to identify parturients at high risk of arrhythmias during spinal anesthesia, so "preanesthetic" risk factors, such as age, body height and weight, were studied.

On the other hand, high spinal block occurred in nearly all of our patients (95.3% above T₆). Additionally, there is no uniform definition of high spinal anesthesia. Peak block height greater than or equal to T₄, T₅, or T₆ has been used to be the criteria of high spinal anesthesia.^{3,4,5} Therefore, it seems to be inappropriate to analyze the correlation between the arrhythmias and high spinal block in our study.

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Acute tongue swelling in an edentulous patient, relieved by denture insertion

To the Editor:

We wish to report a 60-yr-old edentulous woman who had tongue swelling after general anesthesia for a hysterectomy. Extubated 'deep' after surgery, she was able to maintain her airway and breathing. Fifteen minutes later, her tongue was protruding from her mouth, swollen and cyanosed. The swelling rapidly worsened. Fearing impending obstruction, the anesthesiologist decided to examine the airway under sevoflurane anesthesia. As her jaw muscles relaxed, the tongue swelling rapidly subsided and examination was entirely normal but during recovery, swelling recurred. Noting that the alveolar margins were compressing the tongue, causing venous congestion and tongue swelling, the anesthesiologist used his thumbs to separate the margins. Her dentures were fetched from the ward and inserted to maintain this separation. Swelling then did not recur, even though she still had not recovered sufficiently to relax her jaw muscles.

Edentulous patients often have relative macroglossia due to resorption of tooth-bearing bone and a reduced oral cavity volume.¹ The tongue also spreads laterally when dentures are removed.² This patient also had over-closure of the mandible, further reducing the oral cavity volume. Without her dentures, these changes may have predisposed her to tongue compression and swelling when conscious control of the jaw muscles is lost and masseter hypertrophy ensues. Denture insertion increased the anterior height of her oral cavity by 24 mm and the posterior height by 10 mm.

Our patient demonstrates the benefit of denture insertion in the perioperative period - maintenance of