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EDITORIAL

Challenges in obstetric anesthesia

Since the dawn of humanity, childbirth has taken place in a very painful way, being accepted as such even with biblical quotes. One of them, possibly the best-known, appears in *Genesis*, chapter 03, verse 16: ''To the woman, He [God] said: 'I will surely multiply your pain in childbearing; in pain you shall bring forth children'''.

In October 1846, dentist William Thomas Green Morton (1819−1868) successfully demonstrated the first anesthesia using ether to remove a neck tumor at the Massachusetts General Hospital in Boston. After this event, the obstetrician James Young Simpson (1811−1870) has used ether and chloroform as anesthesia for deliveries in Scotland, and similarly proceeded John Snow (1813−1858) and Walter Channing (1786−1876), respectively in England and the United States of America.

At that time, there was great religious and medical resistance to this innovation. However, in 1853, Queen Victoria asked John Snow to administer chloroform for the birth of her eighth child. After this event, the technique became quite popular, being known in England as ''Anesthesia a la Reine''.[1–5] These modalities of labor analgesia were considered the standard care for a long time until other techniques have emerged, including the use of nitrous oxide,[6] intravenous opioids,[7] ketamine,[8,9] and, eventually, neuroaxial anesthesia for vaginal delivery.

In Brazil, the right to methods of pain relief during labor is guaranteed by law to all women in the Unified Health System (SUS).[10] Nevertheless, for many years, general anesthesia was the technique of choice for both elective and emergency obstetric procedures. In the last 30 years, there has been an overall increasing trend towards neuroaxial anesthesia instead of general anesthesia for obstetric women. Neuroaxial anesthesia has become the state-of-the-art essentially in all obstetric centers, reflecting the improvement in the quality of care for pregnant women, with many advantages over the techniques previously used.[11]

Consensus has not always existed in scientific community about neuroaxial labor analgesia. Many controversies and doubts were raised regarding the effects of neuroaxial techniques for labor analgesia, especially regarding the potential increase in labor duration and the increase in instrumental delivery rates. Fortunately, most of these controversies have been solved by solid scientific evidence, and neuroaxial techniques are currently widely used and accepted.[12,13]

In this issue of the *Brazilian Journal of Anesthesiology* (BJAN), three interesting studies may significantly contribute to the good practice of obstetric anesthesia.[14–16] Those manuscripts have addressed exciting topics in obstetric anesthesia, including education strategies for future anesthesiologists,[14] the association of labor pain with postpartum depression,[15] and the influence of obesity on obstetric anesthesia outcomes.[16]

General anaesthesia is mostly performed for emergency cesarean sections and due to a lack of time to administer neuraxial anaesthesia.[17] However, for most anaesthesiologists, the clinical experience with general anaesthesia is quite low in the obstetric population. Notably, simulation is a well-known modern teaching tool, which can greatly contribute to the training in anesthesiology, especially in unusual clinical circumstances. Hence, Teixeira et al.[14] evaluated the ability of anesthesiology residents to perform general anesthesia for emergency cesarean section in a safe simulation environment. Although the performance evaluation was satisfactory, authors have recommended the standardization of simulation techniques in the obstetric area in order to further improve the development of future generations of anesthesiologists.

Furthermore, Edipoglu et al.[15] have demonstrated that patients who underwent epidural analgesia for vaginal delivery, when compared to those in which delivery occurred without neuroaxial analgesia, displayed lower pain scores during labor and lower incidence of postpartum depression. This study has demonstrated the importance of a flawless anesthetic care for women in labor in order to improve long-term postpartum outcomes.

Finally, González-Tascón et al.[16] have retrospectively evaluated approximately one thousand obese obstetric women who received neuroaxial analgesia for labor and delivery, focusing on outcomes related to the neuroaxial techniques and their success rate. Remarkably, the authors

observed a greater number of puncture attempts to perform neuroaxial anesthesia and a surprising increase in the cesarean section rate in obese as compared with non-obese patients.[16] Obesity is currently a major public health problem worldwide, overwhelmingly affecting the obstetric population. Therefore, more research is warranted in this field, providing strong scientific evidence and guidelines to optimize multidisciplinary perinatal care in high-risk obstetric patients.[18,19]

Obstetric anesthesia is still a hot topic in the anesthesia literature. Despite many recent advances in the field, the assistance of obstetric patients is still frequently challenging to the anesthesiologists everywhere. The studies published in this issue of BJAN aimed to present new insights into the obstetric anesthesia scenario. In summary, they have shown that advances in training techniques and understanding the potential benefits of anesthetic techniques and their limitations is essential to improve clinical outcomes in the obstetric setting.

Conflicts of interest

The authors declare no conflicts of interest.

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Ana Maria M. Caetano [a,*], André P. Schmidt [b]
[a] Universidade Federal de Pernambuco (UFPE), Departamento de Cirurgia, Disciplina de Anestesiologia, Recife, PE, Brazil
[b] Universidade Federal do Rio Grande do Sul (UFRGS), Hospital de Clínicas de Porto Alegre (HCPA), Serviço de Anestesia e Medicina Perioperatória, Porto Alegre, RS, Brazil

[*] Corresponding author.
E-mail: ana.caetano@ufpe.br (A.M. Caetano).