

Contemplation about dexamethasone usage in neuroaxial analgesia for labor pain

Dear Editor,

We read with great interest the article by Dr. Wahdan and his colleagues^[1] “Epidural levobupivacaine versus a combination of levobupivacaine and dexamethasone in patients receiving epidural analgesia”, which appeared in the January 2019 Journal of Anaesthesiology Clinical Pharmacology. The results of the article were very attractive and brilliant for us. We emphasize upon their findings by levobupivacaine and dexamethasone combination in order to create neuroaxial analgesia for labor pain. However, some fine points to be considered.

The experience of labor pain during childbirth is dependent on multiple factors and its intensity can vary greatly. The majority of women in vaginal delivery required a pain management strategy. One of the most popular strategies to control labor pain is prescribing drugs in epidural space through the inserted catheter.^[1] We noticed that the authors designed their study based on epidural analgesia with the duration of analgesia as the main primary outcome of the study, but they did not determine the visual analogue scale (VAS) score of the “reappearance of pain”. The authors mentioned “upon reappearance of pain”. They prescribed “8 mL of 0.125% levobupivacaine through epidural catheter” after pain sensation by the pregnant woman. They did not re-evaluate the efficacy of this prescription while “further analgesia was provided with 8 mL of 0.125% levobupivacaine hourly”. In this setting, labor timing plays an important role in the total amount of prescribed levobupivacaine. The authors did not consider childbirth time as a confounding factor in their analysis and discussion. Despite dexamethasone being safe during pregnancy, and may be used systematically to improve outcomes in preterm labor,^[2] we believe that the safety evaluation of epidural dexamethasone injection on the neonatal Appearance, Pulse, Grimace, Activity, and Respiration (APGAR) score and umbilical vein parameters as secondary outcomes is not acceptable. In addition, it has been reported that epidural dexamethasone dose of 8 mg is more effective for post-operative pain management.^[3,4] The authors used 4 mg of dexamethasone in epidural space,^[1] since the epidural space is far away from the nerve with more potential space in comparison with intrathecal space. It seems

that 8 mg was suitable for their investigation.^[2] Nevertheless, the authors mentioned it as the study limitation, honestly. Also, the authors did not present any chemical information about the drugs, especially dexamethasone in their study. Oxytocin is used in labor induction and maintenance for labor help and facility. It works as a neurotransmitter and a hormone to regulate multiple physiological functions. Oxytocin has been recognized as an important mediator of endogenous analgesia. The study has given clear evidence for the role of oxytocin in the modulation of nociception.^[5] But, the authors did not consider this confounding factor. They should report the prescribed amount of oxytocin and adjust their results relative to it. The previous study reported dexamethasone as a strategy for post-operative nausea and vomiting management^[3] while Wahdan *et al.*^[1] have not reported any significant difference between the two groups. We suggest that they re-evaluate their sample size and study power.

We believe that this appraised article contains useful and practical subjects in the management of labor pain by intraepidural space dexamethasone. However, there are some limitations in the researches.

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Conflicts of interest

There are no conflicts of interest.

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