



Effect of phenylephrine on the prevention of oxytocin-induced hypotension

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To the Editor:

We read with great interest the recent article by Mohta et al. [1]. Their inspirational study on this important topic deserves further discussion. In particular, we have some concerns in regards to their study conclusion: the authors have claimed that oxytocin infusions at 5 IU/h and 10 IU/h are more effective in reducing blood loss and preventing postpartum hemorrhage (PPH) than 2.5 IU/h.

It is well known that spinal anesthesia can be frequently complicated by hypotension, with incidence exceeding 80% occasionally [2]. In the mean time, oxytocin causes hypotension and reflex tachycardia as an adverse effect due to action on oxytocin receptors found in the heart and large vessels during cesarean section [3]. In the study by Mohta et al. [1], the difference in the incidence of hypotension was statistically significant between groups 2.5 and 10 ($p=0.004$), and the same between groups 2.5 and 5 and between groups 5 and 10 were statistically not significant. However, an important question is raised: it was not clear that hypotension was induced by spinal anesthesia or oxytocin?

Furthermore, to prevent this hypotension, various vasopressors such as ephedrine, mephentermine and

phenylephrine can be used. It has been observed that co-administration of phenylephrine obtunds oxytocin-induced decrease in systemic vascular resistance and increase in heart rate and cardiac output [4]. In addition, the study reported that co-administration of phenylephrine 75 µg with oxytocin 3U reduces the incidence of oxytocin-induced hypotension compared to phenylephrine 50 µg with oxytocin 3U during caesarean section under spinal anaesthesia [5]. In the study by Mohta et al. [1], it was not reported that how to use vasopressors or none-use. Under such setting, the incidence of hypotension, nausea and vomiting among groups 2.5, 5 and 10 might be not accurate.

From the discussion above, the study by Mohta et al. [1] did not provide convincing evidence that the dose of 10 IU/h, is associated with a high incidence of side effects. We suggest that further study is necessary to elucidate the relationship between the the changes and outcomes.

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