## LETTERS TO THE EDITOR

# INTRATHECAL CLONIDINE FOR CONTROL OF LABOR PAIN: INTERNATIONAL PERSPECTIVE

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Intrathecal (subarachnoid) injections of clonidine for controlling labor pain still remain controversial. In a recent publication Belhadj Amor et al. report on their experience with combined spinal-epidural analgesia using a combination of subarachnoid bupivacaine, 2.5 mg, sufentanil, 5 μg and clonidine, 30 μg for labor pain[1]. The authors concluded that although intrathecal clonidine, 30 μg prolongs (labor) analgesia, it increases the incidence of (maternal) hypotension, and abnormal fetal heart rate (FHR) patterns, and its use is thus not recommended[1].

This conclusion/recommendation might not be quite consistent with the findings and recommendations of other researches on the very same subject[2-6].

First, van Tuijl et al[2] investigated the effect of the addition of intrathecal clonidine (75 μg) to hyperbaric bupivacaine on postoperative morphine consumption after Cesarean section in a randomized controlled double-blind trial. A group of 106 women received spinal anesthesia using either bupivacaine 0.5% (2.2 ml) with 0.5 ml normal saline 0.9%

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or bupivacaine 0.5% (2.2 ml) with clonidine (75 μg) in 0.5 ml normal saline 0.9%. The authors concluded that the addition of clonidine (75 μg) to hyperbaric bupivacaine prolongs spinal anesthesia after Cesarean section and improves early analgesia, but does not reduce the postoperative morphine consumption during the first 24 hours. No clinically relevant maternal or neonatal side-effects were reported in this study[2].

Second, in a recent prospective, double-blind study Kanazi et al[3] evaluated the duration of anesthesia, hemodynamic stability and side effects of intrathecal bupivacaine supplemented with 30 μg of clonidine, and concluded that clonidine, 30 μg when added to intrathecal bupivacaine, produced prolongation in the duration of the motor and sensory block with preserved hemodynamic stability and lack of sedation.

Third, Davis and Kopacz[4] in a double-blind, randomized crossover study, compared spinal anesthesia with preservative-free 2-chloroprocaine (30 mg) with and without clonidine (15 μg) in healthy volunteers. The authors concluded that small-dose clonidine increases the duration and improves the quality of 2-chloroprocaine spinal anesthesia without systemic side effects.

Fourth, Rochette et al.[5] conducted a controlled, prospective, dose-ranging study of clonidine in spinal anesthesia in 75 neonates undergoing elective inguinal herniorrhaphy. Patients were given a spinal anesthetic with either 0.5% plain isobaric bupivacaine (1 mg/kg), or bupivacaine plus 0.25, 0.5, 1, or 2 μg/kg clonidine. Mean arterial blood pressure, heart rate, $SpO_2$, sensory block extension and duration of anesthesia were the main data recorded. The authors concluded that clonidine 1 μg/kg, added to spinal isobaric bupivacaine, doubled the duration of the block without significant deleterious hemodynamic or respiratory side effects[5].

Fifth, Kuczkowski and Chandra investigated the effects (e.g., maternal satisfaction[6], duration and side effects[7,8] of single dose spinal analgesia with combination of bupivacaine, 2.5 mg morphine, 0.25 mg and clonidine 45 μg, for the management of obstetric pain in laboring women. No clinically relevant maternal (e.g., hypotension) or neonatal (e.g., FHR abnormalities) side-effects were reported in this study. The authors concluded that

clonidine when added to spinal bupivacaine, prolonged the duration of the block (both motor and sensory) without clinically significant deleterious hemodynamic or respiratory side effects[6-8]. The authors also concluded that their technique was very cost effective (maternal satisfaction with this technique was very high) and it should be recommended for routine obstetric pain control in the developing world[8].

**Keywords:** Labor pain; labor analgesia; spinal analgesia; single dose; clonidine; complications, bupivacaine; obstetric anesthesia.

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