

## البحث الثاني

# **Comparative study between the effect of intrathecal midazolam versus intrathecal midazolam plus magnesium sulfate on efficacy and duration of analgesia in patients undergoing cesarean section**

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### **ABSTRACT**

**Background:** Regional techniques employing either epidural or intrathecal routes are currently the most popular methods of pain relief during labor and delivery.

The aim of the study was to compare efficacy and duration of analgesia produced by adding magnesium sulfate to intrathecal bupivacaine (10mg) plus midazolam (1mg) in patients undergoing cesarean section.

**Patients and methods:** In our study 60 patients aged 18 to 35 years of American Society of Anesthesiologists (ASA) class I and II were scheduled for cesarian section under intrathecal block and randomly divided into 2 groups:

**Midazolam group (group M):** Thirty patients received (10mg/2ml), Intrathecal 0.5% hyperbaric bupivacaine, midazolam (1mg/0.2ml) and (0.8ml) normal saline.

**Magnesium Midazolam group (group MM):** Thirty patients received 10mg/2ml intrathecal 0.5% hyperbaric bupivacaine, midazolam (1mg/0.2ml), magnesium sulfate (50mg/0.5ml) and (0.3ml) normal saline. The onset and duration of both sensory and motor block, total dose of analgesia and adverse effects were recorded.

**Results:** the onset of sensory block was significantly delayed in MM group compared to M group ( $6.05 \pm 1.1$  min vs  $3.5 \pm 0.45$  min,  $P=0.024$ ), the duration of sensory block was longer in MM group compared to M group ( $132.4 \pm 7.8$  min vs  $115.3 \pm 6.60$ ,  $P=0.018$ ).

In addition, the onset of motor block was delayed in MM group ( $7.05 \pm 1.3$  min) compared to M group ( $5 \pm 0.65$  min) ( $P=0.028$ ) as well as its duration ( $149.9 \pm 8.67$  vs  $126.3 \pm 5.35$  min,  $P=0.005$ ).

We **concluded** that the addition of magnesium sulfate to intrathecal bupivacaine plus midazolam led to a significant delay in the onset of both sensory and motor blockade, and also prolonged their duration without side effects.

**Key words:** cesarean section, magnesium sulfate, midazolam