To study the efficacy of intrathecal morphine for perioperative analgesia after pelvic acetabular stabilisation

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Introduction:
Intrathecal opioids are commonly used for perioperative analgesia along with general anaesthesia for prolonged surgery or for surgery in position other than supine. We compared the efficacy of intrathecal morphine and bupivacaine and a combination of intrathecal morphine and bupivacaine for perioperative analgesia in patients undergoing pelvic acetabular surgery.

Methods:
Seventy-five patients with pelvic-acetabular fracture were randomly divided into three groups. They were allocated to receive intrathecal morphine (300μg) (M group), intrathecal bupivacaine (10mg) (B group) or combination of intrathecal morphine and bupivacaine (300 + 5mg) (MB group). All patients received general anaesthesia followed by intrathecal drugs at L2-3/L3-4 interspace. For postoperative analgesia, each patient received patient controlled analgesia (PCA) with morphine.

Results:
The first requests for PCA morphine as well as total morphine requirement in the postoperative period, which were considered as endpoints of efficacy, were comparable between M and MB groups. Intraoperative fentanyl requirement was also comparable between these groups and was significantly more than B group. The adverse effects in three groups were comparable.

Discussion:
In our study, total morphine consumption in the postoperative period for 24 hours was comparable between M and MB groups and this was significantly more than the B group. Our study also elucidated the fact that intrathecal morphine provides good postoperative analgesia and combining with bupivacaine reduces the intraoperative analgesia requirement.

Pruritis, which is the most common adverse effect observed after intrathecal morphine was seen in two patients (8%) in MB group and did not require any treatment. The incidence of PONV was 4% in M group. None of our patients developed respiratory depression. But, there is no ideal dose at which there is no risk of respiratory depression hence, vigilant monitoring is required for all patients receiving intrathecal morphine.

We conclude that 300μg of intrathecal morphine provides adequate postoperative analgesia after pelvic acetabular surgery without an increase in the side effects and addition of bupivacaine is effective in reducing intraoperative analgesia requirement.
Conclusions:
We found that a single shot of 300µg of intrathecal morphine provides adequate analgesia in the postoperative period after pelvic-acetabular surgery. The addition of bupivacaine did not enhance the analgesic efficacy of intrathecal morphine in the postoperative period but it was useful in reducing the intraoperative requirement. No serious adverse effects were observed due to 300µg of intrathecal morphine.

Key words: Intrathecal morphine, pelvic acetabular injury, perioperative analgesia

Key Message: Single shot intrathecal morphine(300µg) combined with bupivacaine is safe and provides optimum perioperative analgesia in pelvic-acetabular stabilisation